

PALM-LEAF AND OTHER MANUSCRIPTS IN INDIAN LANGUAGES



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INSTITUTE OF ASIAN STUDIES

Chettimancherry, Madras-600 119.

PALM-LEAF AND OTHER MANUSCRIPTS IN INDIAN LANGUAGES

(PROCEEDINGS OF THE NATIONAL SEMINAR)

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PALM-LEAF AND OTHER MANUSCRIPTS IN INDIAN LANGUAGES

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Preface

The Palm-leaf Manuscripts were the powerful medium for transmission of ideas, knowledge and culture of our Indian society based essentially on an agrarian civilization. They serve as powerful tools for the preservation of our literary, linguistic, cultural and art heritage. On these fragile palm-leaves our traditional scribes with their stylus inscribed characters which embed the vital part of the superstructure of our society.

The advent of an advanced technology and an urban civilization, the laying of railway lines and the introduction of western type of education together with paper and printing press brought a sea-change in the mode of transmission of knowledge. The attempt of printing Tamil texts from palm-leaf manuscript did not succeed in gaining a good momentum owing to many failures. For example, the western education and the cultural imperialism advocated by Lord Macaulay left an indelible impression in the minds of the people that the native cultural traditions are far inferior to those of Europe. Since the English education provided opportunities to seek employment in Government service, the habit of studying the traditional texts written on Palm-Leaf manuscripts started deteriorating and these manuscripts came to be considered as objects futile for an attractive wordly life. Consequently scholars had to confront with discouragement and financial strain in printing such rare texts. The slow and steady decline in the art of writing in and deciphering of the Palm-Leaf Manuscripts only intensified the decay of the manuscript.

A deplorable tendency is gaining ground in this scientific and technological age with its accent on mechanical material orientation that views these rare manuscripts of the past as irrelevant to the modern sensibility and assigns them an exhibition value. Such an attitude would result in depriving posterity of a significant component of the cultural and literary heritage of our people.

About 75% of the palm-leaf manuscripts stored in various places have not yet seen the light of print and they have not been subjected to serious study. In view of the possibility that the publication of these palm-leaf materials may modify or prove wrong the conclusions of our research arrived on the basis of the printed texts, the importance of their preservation cannot be exaggerated.

The Institute of Asian Studies has already taken active steps to preserve the palm-leaf manuscripts from further decay and disintegration caused by human negligence and natural calamities. It aims at preserving

the rare palm-leaf manuscripts in the phases of collection, conservation, training programme, computerising Manus data, microfilming, preparation of Descriptive Catalogue and publication of manuscripts with English versions.

The work of collecting palm-leaf manuscripts is indispensable and has to be quickened since any delay in the effort would result in the disintegration of more and more works. The Institute of Asian Studies was able to collect more than one thousand such rare works.

Being organic in nature, palm-leaf is subject to different types of deterioration agencies like climatic factors, light and insects. Further, constant handling and adverse storage conditions accentuate deterioration. Several types of defects such as stains, discolouring, damage by insects, fungal effect, splitting or cleavage of the surface layer, fading of writing, brittleness and weakening of the leaves are noticed in our rare collections. Hence it is essential to set up conservation laboratories in all the centres where such manuscripts are stored and to enlist the services of the professional people to give good treatment to them.

As the number of persons who can decipher the writings in palm-leaves is reducing day by day it is imperative that intensive training is imparted to scholars in various aspects of manuscriptology such as deciphering, editing, conservation and preservation and textual criticism. Every year, the Institute of Asian Studies organizes workshops and training programmes and impart training to a large number of scholars in this discipline. Such programmes should be organized by all the centres of Tamil palm-leaf manuscripts and if possible, they may form part of our regular University courses especially in the Master's degree in Tamil language and literature.

The Institute of Asian Studies is also engaged in computerizing all the information pertaining to palm-leaf manuscripts in Tamil and making it available to scholars all over the world so that Tamil texts available in palm-leaf manuscripts may be subjected to research both at the national and international levels.

The Institute plans to microfilm the entire Tamil palm-leaf manuscripts in three or four years. The printout of the manuscripts thus microfilmed will be transliterated into the modern script by a team of editors and they will be fed into the computer disks.

The Institute is engaged in the preparation of an integrated Descriptive Catalogue of Tamil palm-leaf manuscripts in about 30 volumes

each in two parts of 1200 pages covering the whole of Tamil palm-leaf manuscripts in India and abroad.

The Instituté has a very large publication programme under which many unpublished manuscripts are being published with English versions with a view to making them accessible to scholars all over the world. Under this scheme it has already brought out very valuable books such as *The Dateless Muse*, *The Unsung Melodies*, *The Bandit Brothers*, *The First Freedom Fighter* and *Varma Cuttiram* which serve as valuable source materials for the study of the social history and cultural heritage of the Tamils.

The UNESCO is launching a similar programme under the title, *The Memory of the World*, which aims at safeguarding the fast vanishing archival materials of the world. In the first meeting of the International Advisory Committee of this programme held at Warsaw, Poland, Dr.G.John Samuel made scholars aware of the deplorable condition of nearly 8,00,000 palm-leaf manuscripts of Indian languages, and particularly, 83,000 manuscripts in Tamil. He dwelt on the desperate need to preserve them to posterity and requested the Committee to include the palm-leaf manuscripts in the list of the most endangered documents of the world. The Expert Committee has not only accepted his request but also recommended it to the General Body for taking suitable steps to preserve them.

The Institute of Asian Studies proposed at the preliminary stage that a National Seminar on Palm-leaf manuscripts should be organized with a view to taking a survey of the palm-leaf manuscripts in languages other than Tamil.

The National Seminar on Palm-leaf Manuscripts was jointly organized by the Institute of Asian Studies and Pondicherry Central University at Pondicherry for three days from 11th to 13th January 1995. Scholars from all over India participated in it and presented papers that bespoke of the progress made in this field. The paper on Palm-leaf Manuscripts in Rangunath temple, Jammu, for example, is rich in information about preservation and storage of Palm-leaf Manuscripts. The subjects covered by the palm-leaf manuscripts are many like religion, history, sorcery, folklore, astrology, medicine, etc. papers in Sanskrit in this field provide the number of Sanskrit manuscripts available in and outside India. The papers in non-regional languages like Pali and Modi in this field are also informative and useful.

A few papers list the techniques and methods of preservation of manuscripts both ancient and modern and provide a comparative analysis of both. Modern methods like Xeroxing, Microfilming and Computerising are suggested.

This volume, which covers the survey of nearly fifteen Indian languages - both regional and non-regional, as indicated in the contents, is not exhaustive. For instance, information regarding Sanskrit Manuscripts in North India seems inadequate despite the details provided. Moreover, a complete survey of the Manuscripts in Śāradā script seems necessary, though its existence is referred to in a few articles. Attempts have been made to contact the centres of Sanskrit language and the experts of Śāradā script, but the responses are not quite fruitful. Considering the time factor, this volume has to be published with the sources available.

If a large number of academic centres and universities emulate the Institute of Asian Studies and undertake similar programmes it is not impossible to preserve to posterity the rich cultural treasures of our country which form a significant component of the composite culture of the Asians.

The Institute is grateful to Dr. A. Gnanam, Vice-Chancellor, Pondicherry University, for extending a whole hearted co-operation to make this seminar a great success. The Institute records its appreciation of the devoted services of many of the members of its staff and also the staff of Pondicherry University in organizing this three-day National Seminar on Palm-leaf Manuscripts. Thanks are due to the artist Mr. A.S.Natarajan who has designed the wrapper and M/s.Akshara press, who have printed this book excellently in a neat manner.

Institute of Asian Studies

Sessions

11.1.1995

Forenoon 10.30 to 12.00 A.M. : Inaugural function

Afternoon 2.00 to 5.00 P.M.

Chair Person Dr. Tusharkanti Mahapatra.

- | | |
|----------------------|---|
| 1. Mr.K.K.Bisoi | Palm-leaf Manuscripts in Oriya |
| 2. Prof. B.B.Chaubey | Palm-leaf Manuscripts in Punjabi |
| 3. Dr. Champa Sharma | Manuscripts in Ragunath Temple, Jammu |
| 4. Dr. S.Subramanian | Palm-leaf and other Manuscripts in Hindi. |

12.1.1995

Forenoon 9.30 to 12.00 A.M.

Chair Person Dr. K.Kunjunni Raja

- | | |
|------------------------------|---|
| 5. Dr.Saroja Bhate | A Survey of Marathi Manuscripts |
| 6. Mr. Vivekanandagopal | Modi Documents in Tamilnadu |
| 7. Dr. Tusharkanti Mahapatra | Palm-leaf Manuscripts in Bengali |
| 8. Dr. Biswanarayan Shastri | Sāñcipāt Manuscripts. |
| 9. Dr. Kanubhai V. Sheth | Palm-leaf and other Manuscripts in Gujarati |

Afternoon 2.00 P.M. to 5.00 P.M.

Chair Person Dr. N. Harinarayana

- | | |
|-----------------------------|--|
| 10. Dr. C.Panduranga Bhatta | Palm-leaf and other Manuscripts in Sanskrit
(Available in four Southern States) |
| 11. Dr. K.Kunjunni Raja | Palm-leaf Manuscripts in Sanskrit
(Available outside India) |
| 12. Prof. C.S.Upasak | Pali Manuscripts in India
- A Desideratum. |

13.1.95

Forenoon 9.00 to 12.00 A.M.

Chair Person Dr. M.Shanmugam Pillai

- | | | |
|-----|--------------------|------------------------------------|
| 13. | Dr. P.Subramaniam | Palm-leaf Manuscripts in Tamil |
| 14. | Mr. N.Geethacharya | Palm-leaf Manuscripts in Kannada |
| 15. | Dr. K.Vijayan | Palm-leaf Manuscripts in Malayalam |
| 16. | Dr. J.V.Satyavani | Palm-leaf Manuscripts in Telugu |

Afternoon 2.00 P.M. to 5.00 P.M.

Chair Person Dr. Biswanarayan Shastri

- | | | |
|-----|--------------------|--|
| 17. | Dr. N.Harinarayana | Techniques of Conservation of Palm-leaf Manuscripts: Ancient and Modern. |
| 18. | Dr.Yashodara Joshi | Modern Techniques of Preservation and Conservation of Palm-leaf Manuscripts. |
| 19. | Mr. C.L.Prajapati | Modern Techniques on Conservation of Palm-leaf Manuscripts. |

Note on Transcription of Words from Indian Languages

To facilitate easy reading conventional spellings have been retained in many contexts while adopting Roman transliterations according to generally accepted practice. The following transliterations deserve attention:

Roman transliteration	Sound in Indian Languages	
	Dēvanāgarī Script	Tamil Script
Retroflex	t, th, d, dh	ட, ठ, ड, ढ
Dental	t, th, d, dh,	த, थ, द, ध
Sibilant	ś, s, s	—, ஷ, ஸ
Lateral	l, l̥, l̄,	ல, ற, -
Visarga	h	ஃ
Short Vowels	e, o	எ, ஒ
Long Vowels	ē, ō	ஏ, ஓ

Length in vowels – over the letter
Nasalisation ~ Over the letter

Abbreviations

BHU	–	Banaras Hindu University
c.	–	Century
c.	–	Circa (about)
G.O.M.L.	–	Government Oriental Manuscripts Library, Madras.
I.A.S.W.R.	–	Institute for Advanced Studies of World Religions
I.G.N.C.A.	–	Indira Gandhi National Centre for Arts.
I.R.H.T.	–	Institute of Research on the History of Texts.
L.T.W.A.	–	Library of Tibetan Works and Archives
Ms	–	Manuscript
Mss	–	Manuscripts
S.G.M.L	–	Standard Generalised Mark-up Language
U.V.S.	–	U.V.Swaminatha Iyer Library
VVBIS & IS	–	Vishveshvaranand Vishva Bandhu Institute of Sanskrit and Indological Studies.

Report

The Inaugural Session of the National Seminar on Palm-leaf and other Manuscripts in Indian Languages was held on the forenoon of 11th January 1995. Dr.A.Pandurangan, Professor, Subramania Bharathi School of Tamil Language and Literature, Pondicherry University welcomed the participants and the dignitaries gathered on the occasion. Dr.G.John Samuel, Director for the Research Programme, Institute of Asian Studies, stressed the need for a National Seminar and Explained the objectives of it. He also explained the proceedings of *Memory of the World*, a programme installed by UNESCO, and underscored the urgency to preserve the ancient relics like Palm-leaf Manuscripts. Dr. A. Gnanam, Vice-Chancellor, Pondicherry University, delivered the inaugural address. It was followed by the key-note address given by Francois Gros, in which he aptly enumerated the intricacies of Palm-leaf Manuscripts. He also expressed his deep anguish over people's indifference to Palm-leaf Manuscripts. Dr.Aravanan, Professor, Subramania Bharathi School of Tamil Language and Literature, Pondicherry University proposed the vote of thanks.

After the inaugural sessions, seminar sessions began and went on till the afternoon of 13th January 1995. In the Valedictory Session, which took place on the evening of 13th January 1995, Prof. K. Vijayan from Kerala University shared the experiences of the participants of the seminar. Finally, Professor A.Pandurangan gave the valedictory address.

Objectives of the National Seminar

G. John Samuel

Hon'ble Chief Minister, Respected Vice-Chancellor, Revered Professor Dr. Gros, My beloved friends Dr. Pandurangan and Dr. Shu Hikosaka, Ladies and Gentlemen!

It is now my prime duty to explain the objectives and the scope of this national seminar as briefly as possible. The very basic idea of organising this seminar emanated from some of our attempts to safeguard from decay and deterioration the very valuable archival materials of this country which are getting disintegrated day by day, owing to human negligence and natural calamities. When we undertook a tentative survey of the present condition of the rare palm-leaf manuscripts in Tamil language, we were very much surprised to find out that only 25% of them have been printed and the remaining 75% of the valuable cultural treasures of the Tamil speaking community are perishing in the remote corners of our villages and in a number of the so-called store houses of palm-leaf manuscripts. Our list of the most endangered palm-leaf manuscripts in Tamil grows quite astonishingly and it has touched a sizable number of 80,000. We thought that this pathetic condition may exist in other parts of this country also and a large number of manuscripts in other Indian languages face more or less the same fate of the Tamil Palm-leaf manuscripts. In a horrible situation where the largest percentage of our manuscripts still remain unpublished and quite inaccessible to our scholars, most of our academic researches on our cultural achievements are based only on the 25% of the printed material. We have often thought that the publication of these manuscripts may alter or modify or sometimes disprove the present conclusions of our research which are largely based on the printed materials.

The pitiable condition of Tamil palm-leaf manuscripts made me and my friend Dr. Shu Hikosaka quite restless and we brought this sad plight to the notice of the various Governmental, and public agencies as well as philanthropists although the response received from them was quite frustrating. Even now, many of our manuscripts are set ablaze during various festivals and they are thrown into the river to appease the river deities when there is new flood. There are instances that many of them

were used as fuel to prepare hot water for horses and human beings. The various attempts of the Institute of Asian Studies to safeguard these manuscripts finally won the appreciation of the UNESCO which has invited us to serve in the International Advisory Committee of their new project, namely the *Memory of the World*, which aims at safeguarding from decay the rare archival materials all over the world.

During the first meeting of the above committee held at Warsaw, Poland, the twelve Members who represented various countries discussed the preparation of a world wide list of the most endangered manuscripts in various languages. Under the inspiration derived from this meeting, we decided to prepare an authentic list of the most endangered valuable archival materials in India available in palm-leaf, Bhoja patra, paper and other materials. But, unfortunately, we were not able to get adequate materials from our various centres which evince active interest in manuscript studies. The present seminar is one of our preliminary attempts to make a systematic survey of the most endangered manuscripts available in all the Indian languages.

This seminar is organised with a view to achieving the following objectives:

1. To undertake authentic survey of the palm-leaf and other manuscripts available in various Indian languages as well as to study their contents, conditions, distribution, efforts taken for printing, cataloguing, etc. This survey is essential to speed up our efforts for the preservation and conservation of our decaying cultural treasures as well as to create an awareness among our scholars about the necessity for promoting academic research in them.
2. To pool together the various scholars engaged in academic research on the multifarious aspects of the manuscripts in Indian languages and to enable them to exchange among themselves ideas and knowledge about the research in manuscriptology undertaken on the various linguistic communities of this nation. This will enable them to come out of the academic isolation prevailing here due to narrow minded regionalism and to undertake studies with sufficient knowledge about the contributions of other linguistic communities to this field.
3. To find out ways and means to safeguard all the fast decaying manuscripts in Indian languages and to make organised efforts for their preservation. If necessary we may think about the

creation of a centre which can work with a sense of dedication and commitment for the promotion of research in Indian manuscripts and their preservation. Such a centre is the prime need of this time. Although there are organisations like the National Archives of India and the Indira Gandhi National Centre for Arts, New Delhi, the work in this line is lagging behind and this slow pace itself will pave the way for the destruction of most of our valuable cultural treasures.

We hope this seminar will enable us to think along the foregoing lines and to undertake systematic steps, to safeguard our cultural treasures from the cruel hands of time, and the horrible deteriorating agents and to make them accessible to national and international scholarship. I am sure this seminar will help us to transcend our narrow-minded and parochial approach to our culture and to promote mutual understanding and symbiotic relationship among the various cultural communities of this nation and pave the way for communal harmony and national integration through academic research.

Inaugural Address

A. Gnanam

Dr. Shu Hikosaka, Dr. G. John Samuel, Directors of the Institute of Asian Studies, Madras, Dr. Francois Gros, Dr. Grimal of the French Institute of Indology, Pondicherry, Revered Scholars from different parts of India, Distinguished guests, Members of the faculty, Ladies and Gentleman.

I consider it a great honour and privilege to host the National Seminar on Palm-leaf and other Manuscripts in Indian Languages on behalf of Subramaniya Bharathi School of Tamil Language and Literature, Pondicherry University. The greatness of our nation is enshrined in the treasure houses of manuscripts on various subjects such as language, literature, science, medicine, engineering, religion, philosophy, etc. When compared to the languages of the continents, Asia and Africa, Indian Languages have a glorious past and a long history.

Man has invented a multitude of instruments to make his life happy and care-free. Now he walks in space; communicates with distant countries within minutes. He is trying to unravel the mysteries of the universe. But of all the achievements of man, the acquisition of language is the highest because without language he would not have achieved anything. The invention of language by human beings has no parallel in the history of civilization.

When compared to the origin of language, the invention of script is very recent. The spoken language is always fluid and dynamic; it is ever changing; it is a continuum. By the invention of the script, man achieved permanency for language. He recorded his thoughts through the script and thereby began to communicate with the past and non-past. Language is oral; script is literal.

When man invented the "script" he recorded his thoughts through a variety of mediums. The civilized world of ancient days created hieroglyphs and cuneiforms. Man created pictographs and ideographs from which the script was evolved. He chose and utilised different materials for recording his thoughts according to the needs of the time and availability of writing materials. Man wrote on barks, leaves, clay, rock and metals. In our country Asoka the Great was the first king who introduced the writing

system for the benefit of his citizens. He ordered his officers to inscribe royal proclamations on rocks. He was followed by many other kings who not only engraved on stones but also wrote on copper-plates and palm-leaves. Since palm trees grew abundantly in India, their leaf was chosen as a writing material. Merchants, officers, poets and common man too used palm leaves for carrying out their respective activities. Palm leaf medium, which is very indigenous, is comparable to parchments and papyrus used in the past in the West and China.

Writing on palm-leaf is difficult and requires special training. Every royal court has scribes who were committed to writing royal orders. There were known as Tiruvāymolīk Kēlvi - the modern Personal Assistant (P.A.). There were also higher officers known as Ōlai Nāyakam (Chief of Palm-leaves) who were the custodians of royal orders in palm leaves. Every royal order was signed at the end by the scribe.

When a poet completed his poem, his students copied the original for their studies. Since the students came from different regions, the manuscript was transmitted to other regions. Each generation copied the original manuscripts and the worn out copies were destroyed.

Tamil has a rich treasure of manuscripts. The Oriental Manuscript Libraries in Madras, Tañcāvūr, Tiruvānantapuram and Tiruppati are preserving thousands of manuscripts. The Saiva mutts at Tiruvāvatuturai and Tarumapuram have their own manuscript libraries known as Saraswati Pantarm. The archives of European countries keep a large number of manuscripts in Indian languages.

Father Beschi, popularly known as Vīramāmunivar, wrote his famous *Caturakarāti* on palm-leaves though paper was available then. Since he imitated Indian traditions for the propagation of Christianity, he wanted to continue the tradition of writing on palm-leaf also. *Caturakarāti* was published in book form only after his death.

The great savants Sri.La.Sri.Arumuga Navalar, C.V.Damodaram Pillai, U.Vē.Cāmināta Aiyar and a host of dedicated scholars brought out the important Tamil classics to light from oblivion and thus opened new avenues for the political, cultural and literary history of Tamil Nadu. If there had been no Cāmināta Aiyar, perhaps we would have lost a rich treasure of classical literature.

The Institute of Asian Studies, Madras is attracting the attention of the scholarly world for its dedicated work on Indian languages. It has undertaken the publication of hitherto unpublished manuscripts. We come

to know through a survey conducted by the Institute of Asian Studies that there are still more than one lakh palm-leaf manuscripts in Tamil. The number may increase if we undertake serious attempts to go to every village and town for collecting the manuscripts.

The Institute of Asian Studies, Madras, and Subramaniya Bharathi School of Tamil Language and Literature are jointly conducting a three-day National Seminar on Palm-leaf and other Manuscripts in Indian languages. Scholars from different parts of India-Kashmir, Punjab, Bengal, Assam and Orissa, to name a few, representing different languages are participating. The scholars would deliberate on the preservation as well as the publication of manuscripts. It needs tremendous efforts. The present generation of Indian Language Teachers are not trained to read the manuscripts. Manuscriptology is not included in the curricula of many Universities. While we are introducing modern techniques like computer analysis in language courses, we should also take immediate steps to train our Indian Language Teachers to read and edit the manuscripts. I hope that this Seminar would concentrate on these subjects and give guidelines for future generations of scholars.

With these words, I am very happy to inaugurate the National Seminar.

Keynote Address

Francois Gros

Manuscriptology is, *de facto*, a very old practice, which has only recently become an independent discipline, an instituted subject for teaching and even some proved stuff to feed seminars. It has now established itself, and here you are, to speak about the value of your collections, your know-how in terms of cataloguing, the technique or the recipes, old and new, for preservation of manuscripts. All of you are quite competent and your skilled methodological approach very specific. Why, therefore, should you ask a layman to venture into your well-entrenched field and to attempt to deliver a key-note address?

My only possible justification is, perhaps, to act as a kind of middleman who may remind outsiders of the nature, the importance, and the multifaceted significance of your work.

While it seems pretty clear that any hand-written document can be called a manuscript, and that it is irrelevant here to enumerate the various kinds of material support handwriting has been given through the ages: bark, wood, palm-leaves of different denominations, from our common Borassus to the beautiful large leaves of the Corypha from south-east Asia, scrolls of cloth or skin, from Egyptian papyrus to the numerous varieties of our modern paper, the simple basic question: "what is a manuscript?" remains relevant to the very purpose of your daily routine. This can get evidence from four examples.

The first one is the case of lithic records, epigraphs, with their usual appendix, the copper-plates. The compilers of the famous Mackenzie Collection, which contributed enormously, during the 19th century, to our historical knowledge of the then Madras Presidency, and was still under inventory two decades ago under the supervision of T.V.Mahalingam, thought it proper to include copies of some inscriptions of historical interest. And from the moment the technique of collecting estampages from the walls of the temples, from the slabs lying in their courtyards, even from graffiti inscribed on potsherds or in ancient caves which sheltered Buddhist or Jain monks, developed, those estampages, on awkward paper of awkward sizes, bundled together, with, or without, proper labels, became the nightmare of librarians and curators who had to store and catalogue such untidy

material! And manuscripts they are, displaying even the signature of the scribe who had *written* them on stone (in Tamil for example: "...*madhyastan* So and So *eḷuttu*"), after the decision and under the supervision of the local Assemblies. Displaying also his spelling mistakes and the grammatical or phonetic particularities of his dialect, epigraphs are, most often, located and dated beyond doubt: the dating is as precise as in the colophons of our literary manuscripts, and, in its absence, the place and palaeographic features of the engraved document are as good a *terminus* as a watermark on paper. These recorded variations constitute a unique testimony for a scientific history of the language, a very precious cross-reference to the grammatical treatises. They represent, with their many different readings, the basic manuscripts from which a critical edition of the poetic portion introducing innumerable inscriptions and known as *pracasti* (or *meykkīrtti*) is yet to be compiled... And, sometimes, they happen to be the earliest manuscript within a most respected tradition, thus raising one more puzzling problem. In 1917, at the temple to Tiruvitaivācal, an ancient site, known from the 7th century, near Tiruvārūr, one inscription, belonging to the 12th century, was discovered and published: it contained one saiva hymn from *Tēvāram*, ascribed to Campantar and missing in the palm-leaf manuscript tradition, which has transmitted to us 383 poems only, while 384 are said to be the true number of his known compositions. Is the manuscript on stone, the oldest which is preserved, offering us that missing poem? This seems quite likely; or could it be, surprisingly, a spurious work already? Such conspicuous lithic records are presumed to be genuine, which is not the case of quite a few copper-plates, often involved in private or half-private claims and litigation. But the authentic ones, bundled together and sealed by a thick ring wearing the royal emblems, are certainly the most impressive manuscripts we come across, charters of knowledge and enlightenment, such as the copper-plates of our neighbouring village, Bāhūr, Vāk-ūr, the city of *logos*!

The second opportunity we get to question our obvious definition of what is a manuscript is much less brilliant; it deals with stationery: all the kinds of forms we can register, issued by the numerous Stationery Offices, produced by the administrative imagination. Whenever we fill up a form, we generate some manuscript: the questions are *printed*, we answer with our *handwriting*. This is not just a silly joke. Any printed document, from a marriage invitation to a bank-note, from a school report book to an Income Tax, return is a part of our written patrimony, usually most neglected, but which should deserve our attention also. During an international seminar on "Book and Printing Technology in Far-East and South Asia", organised in 1983 in Paris, Graham Shaw, now the Curator

of the British Library in London, insisted that calendars, almanacs, regulations, all innumerable forms, were linked with the development of commercial printing in early British India, and Andrew Dalby, from the Cambridge University Library, detailed the rather unusual, but all the more precious, Scott Collection in his library, which has preserved an extraordinary amount of such material for India, Burma, Siam and Indochina. We can easily imagine the importance of bills of lading for economic history, or the possible cultural as well as political impact of permits to export opium... But we should also remember that many Tokharian manuscripts from Central Asia are nothing else than scraps of a very repetitive type, used by merchants and customs officers monitoring the traffic of the caravans. They are however precious documents for the linguists, the historians and the anthropologists. It is a remarkable feature of the Raja Mutthia Library, now patronised by the Chicago University Library but harboured in Madras, to include such material. Let us also try to imagine the amount and consequence of the research conducted in archives, both private and official, by any serious biographer who cares to collect primary sources: his hero can be traced, all over his lifetime, through stationery, from his birth registration to his reference in the church, the school, the army, the civil and financial systems, till the plot held in perpetuity in a country churchyard! A typical western itinerary, no doubt; but we must admit that the lack of such data, or their very precarious state of conservation, deprives India of an important historical dimension in the field of biographical studies. The life-sketches of thousands of freedom fighters have been impeded by this factor, including the deterrent that many data collected during fieldwork were written with pencil and so became illegible. You must be mentally prepared to cope with the conservation and preservation of any similar material, likely to get unearthed from public or private institutions, a Chamber of commerce, a zamindari family or a temple trustee. In France, we make no distinction between an archivist and a palaeographer: both study the same syllabus at the same school. Many end up as Curators of libraries, often in-charge of the most unexpected and odd collections of manuscripts, and they are proud of that.

The third example which questions the current definition of a manuscript is the fact that we can produce occurrences of printed manuscripts. Nowadays, it is mostly a costly and fancy way to announce an event or invite people to attend a function, a marriage, an *arankēram*, etc.; it is only a replica of the menus lavishly embroidered on silk and offered on a silver plate in some posh hotels. But, interestingly, there is a tradition in Thailand which has been described in minute detail by Gerald

Duverdier, a librarian formerly attached to the Collège de France, in Paris. In a very scholarly article on 'La transmission de l'imprimerie en Thaïlande: du Catéchisme de 1796 aux impressions bouddhiques sur feuilles de latanier', published in the *Bulletin de l'Ecole Française d'extrême-Orient* in 1980, he recalls how during the 19th century, printing ink was first used to make the engraved letters more readable on the palm-leaf manuscripts. Gradually, by the end of the 19th century, pen and printing ink were substituted for the stylus used to engrave the leaf, and, at last, printing itself started being used, sometimes in colour, on the leaf itself. This phenomenon seems to be an expression of the religious traditionalism of Thai Buddhism, just like in West, after Gutenberg, on occasions, some texts were printed not on paper but on pieces of parchment, namely for churches. What comes as a surprise is the size of such printed palm-leaf manuscripts: a condensed version of the *Tripitaka* in 1620 folios! Such pious and religious publications were mostly issued at the time of cremations, as a part of the funeral rites, and considered as opportunities to acquire and transfer *punya*, merits. But it also developed later into a particular literary genre, more secular, a kind of memorial connected with the personal activities of the departed ones... Anyway, this is certainly a rare and wonderful illustration of the indigenization of a borrowed technology.

The last example I have selected is another kind of printed manuscript, too often neglected as it belongs to a mixed caste, between hand-written manuscripts and printed books; I mean the lithographic prints. As the lithographic technique enables us to reproduce drawings, pictures and even photographs, it has got its nobility in the closed world of booklovers and amateurs of rare illustrated works. But one should not forget that this printing technology was a remarkably effective instrument to spread ideas and knowledge wherever fonts were not easily available, and, namely, all over South and Southeast Asia. As it short-circuits the highly sophisticated and costly stages of casting fonts and composing texts, both in Roman and in Asian alphabets, and goes straight, fast and cheap, from the handwriting of the author to the copy handed over in a bookform to the reader, it has been, during the transitional, but essential, period of the middle of the 19th century, a favourite instrument for the missionaries' propaganda, and a tool of education. We are not aware of any in-depth research on the development of lithographic printing in India or Jaffna except recent important articles by Graham Shaw. However, many early dictionaries or manuals to learn local languages were processed by missionaries for internal use. Manuals for philosophy and theology were compiled, right there, as textbooks for the Indian youths studying in Christian seminaries. The first geographical atlas for elementary teaching

in the Catholic mission in Pondicherry was a lithographic publication, like so many others. Unfortunately, the quality of paper was also intended to remain cheap, and only a few copies have survived. It is all the more necessary to trace and preserve them. Last, it could be interesting to enquire about the possible borrowing of this technology by Indians themselves. Native presses were not encouraged when this technology became popular in India; further, this one had all the requirements to be easily clandestine! However, no comprehensive study is available. This enhances the interest of a rather unique initiative, the few books printed by the king Sarfoji in Tañcāvūr, of which rare samples are preserved in the Saraswathi Mahal Library.

Coming back to a more classical understanding of manuscripts, there is another well accepted tradition which confronts the manuscript, as the original work from the hand of an author, with the printed version of that work. Here again fake 'originals' do exit. We have heard of authors who did not hesitate to write another handmade copy of one of their works to please the fancy of a rich amateur. Such stories are reported about Paul Valéry's manuscript of *La jeune Parque*, or about a few pages of Pierre Louÿs. Jean Genet went to such an extent that he wrote, with pen and ink, fifteen manuscripts of his poem *La Galère*, each autograph singled out by a different variant reading. It happened on 19th of August 1944, and each set of eight leaves in-8, lavishly bound, is now worth several lakhs!

However, the 'original' manuscript has its own mythology: a flavour of authenticity which makes it a most looked for treasury and a unique instrument of investigation into the internal process of literary creation. A careful scrutiny of its alterations, repentance, hesitations, deletions, is a must, all the more so when tackling authors who are masters with regard to the style. I remember an erudite scholar who lost his eyesight perusing the appalling seventeenth century handwriting of Bossuet to trace how he let his inner rhythm and sense of harmony invade his orations from one draft to the next, to the extent of bringing this Doctor of the Church to the verge of misinterpretation, when quoting from the Bible! This seems a story of the olden days, and a methodology which is rendered irrelevant and impossible from the moment writers start using computers to erase and replace everything but the final version. In anticipation of this novel situation, going one step further, modern literary critics, Michel Foucault or Roland Barthes, have claimed the death or disappearing of the author to the advantage of the inter-textual world. Interestingly, western literary criticism now faces here a situation similar to its Indian counterpart: manuscripts which can be traced back to the author himself are only very

few, while the variant readings, which are many, are the contribution of copyists and commentators who reflect the inter-textual milieu through which the work has survived. While any attempt to reach the author and the original version is next to impossible (and the inter-textualists, right or wrong, suggest that this delusive quest is an empty one!) the manuscript tradition of a work through the ages remains, on the contrary, of the utmost interest in terms of cultural history, and the minute task of scrutinising it properly has not lessened at all. That is why manuscripts must be shown, like in the past, every care and respectful attention. We may remember how U.Vē. Cāmināta Aiyar recalls vividly with emotion his first contact with a manuscript, and his feverish quest for the texts of ancient Tamil literature in the collections of the Maths which welcomed him. We could as well quote, from texts of āgamic compliance, prescriptions, even for the layman's benefit, for keeping and honouring manuscripts. This would only give a more bitter taste to a short story published recently by a young promising Brahmin writer, Jeyamokan, in which he describes in appalling details how the important and unique collection of palm-leaf manuscripts kept in a prestigious math is irretrievably destroyed as a part of the deadly fight between two generations of *maṭātipati*. The story may convey some historical innuendo as well as a symbolic value, but it evokes the kind of cultural sacrilege and disaster all of us want to avoid at any cost, and, in order to make such nightmares unrealisable, I will mention briefly now some of the tasks you are facing: to collect, to preserve, to catalogue, to publish...

To collect manuscripts does not come any more under individual endeavour, though the awareness of individuals remains badly necessary if we want to bring to an end the numerous occasions where manuscripts are still lost or destroyed merely out of neglect and ignorance: it is a matter of public concern, and I regret, in a way, that such a Seminar could not be also an opportunity for public lectures and popular exhibitions, in order to impart to the common man some glimpses into his own cultural patrimony. Whatever it may be, the task of collecting existing manuscripts, in India, is stupendous, and we all know several Institutions, private or Government-sponsored, which are actively involved in some part of it. An important initiative could be to identify and list them all. They happen to be quite heterogeneous. Some are religious oriented, Jain, Buddhist or Hindu; some are purely academically oriented, often attached to a university or to a research institute; some are under international co-operation, like in Nepal; some rely on very important foundations, like the I.G.N.C.A.; some call for the generosity of patrons, etc. While we cannot but be very happy to see such tremendous good will, we must also be

aware of the fact that this dispersion brings an element of confusion, as everyone follows one's own guidelines when it comes to preservation and cataloguing, not to speak of the certain amount of overlapping. Further, with or without telling it clearly, each institution may operate according to its own choice, and this generates two dangers.

The first one is to give more importance to some categories of texts only, at the cost of others. People may look for complete manuscripts of major works; this is the type of collections we get in some important libraries, like royal palace libraries, where texts were gathered together, if not copied to order, for the prestige of the library. Obviously, institutions with a religious proclivity will reflect that preference in their collections, etc. But what is at stake here is the fundamental common point that all pay more attention to the texts which are complete and already accepted by the tradition than to 'minor' ones which may be of equal importance. To give a simple example, I will refer to the edition of the *Tēvāram* Hymns by the French Institute in Pondicherry. It is based on the consultation of 54 manuscripts, most of them complete, and we can safely take for granted that, though this selection is quite representative of the manuscript tradition, it is not yet a comprehensive list of the available copies. But, due to the nature and purpose of that edition, another category of manuscripts, which I would like to call the 'subaltern' manuscripts, not of the full *Tēvāram*, but of parts of it, were deliberately set apart, however unfair it may look. Each *ōtuvar*, or professional traditional singer of the *Tēvāram* in the saiva temples of Tamilnad, used to keep one or several notebooks, in which the song of his own repertory were written down. Such versions are usually ignored, if not looked down, by the pandits who view them as collections of mistakes, and they may be right! However, in terms of the popularity of the hymns and in terms of the language alterations, they should be collected and studied also, even in their tattered condition. The purpose of such study may be more an anthropological approach of the cultural transmission of tradition in a particular milieu than an exercise in textual criticism, but it remains the duty of people in charge of collecting manuscripts to pay equal attention to the two categories of source material, the main one and the subaltern one.

There is another set of precious notebooks, the recipes which any *aṣṭavaitya* from Kerala will keep from generation to generation in his office, and from which he draws the formula of the remedies he himself prepares. While we read the fundamental texts of Ayurvedic medicine of pan-Indian fame, we should consider that the actual practitioners know them only through their personal notebooks or, at best, through local commentaries

in Malayalam, or perhaps through some kind of medical and botanical *manipravāḷam*. The same is also true of the notebooks, sketches and manuals in various local languages which the *sthapati* are perusing rather than the Sanskrit *Silpasāstra*, which are usually beyond their reach, even when they claim to draw their knowledge from them. Any sâstric discipline is transmitted with reference to the fundamental texts, but, more precisely, through their local expression in another batch of documents we hardly trouble ourselves to collect. Fortunately, there are a few attempts, more recent, to come closer to the true actuality of the transmission of knowledge in traditional India.

The second danger is that the way manuscripts are entered into huge collections may too often destroy for ever their former arrangement in a smaller ensemble, whose significance is irreparably lost, while it was of first rate importance in terms of cultural history. Private collections, like private libraries are a reflection of a cultural milieu, they answer to practical needs and aspirations. They are the true cultural pulse of the readers. The moment they are split and redistributed into the new categories of a bigger library, they surrender a part of their identity and their significance. Here again, with your permission, I will evoke the experience I got from the collection of Sanskrit manuscripts in the library of the French Institute in Pondicherry. That collection has specialised from its very beginning in āgamic saiva literature and, out of the texts assembled and some of them published in the course of years, the myth has flourished that we possess and have edited all the 28 saiva āgamas... But what the reality gives, instead, is a rather different picture. Most of those manuscripts come from houses of temple priests, who were rarely wealthy and fortunate enough to own the complete texts. Most often, they were collecting fragments for their own purpose, not mainly from āgamas but rather from the enormous literature derived from them, manuals for ritual practitioners, short guides to perform their duties properly and advise the laity, series of stotras, prayers, etc. And they were also keeping some basic reference works for elementary, or more refined, Sanskrit studies, say, some *nighantū*, a manual of logic, some samples of classical kāvya and the Epics. A detailed study, which ought to be statistical and comparative, of all these somehow artificially assembled fragments, may evidence the existence of fundamental texts otherwise not available, but chiefly the popularity of some āgamic texts, already known, but rediscovered, truncated here for daily use, scattered into pieces for the sake of an argument, still well alive and relevant at every step of their owner's life and professional activity. For a long time, the general editor struggled to restore some ur-texts in their entirety and argued about their antiquity... But a close scrutiny of

the very nature of the material collected invites also to look at a very recent past, the life-story of the *gurukkal* and the structure of their intellectual world, an attempt towards cultural history, which remains possible only because our own entries have never destroyed the memory of the initial arrangement of the batches of manuscripts as it existed when they had been acquired, notwithstanding the editorial requirements which were the acknowledged purpose of the collection. You will excuse me to insist: there is no good cataloguing possible if the acquisition policy was scientifically faulty at the beginning. New acquisitions are like adopted kids. Peremptory attitudes and despotic rules never help. It is only through love and careful understanding that their personality will reveal itself and blossom.

That is why I would like to make a special appeal regarding folk-literature. In the field of *sāstric* texts, we have seen how the chain goes from the pan-Indian Sanskrit authorities, through commentaries and local interpretations to a set of aids for practitioners, which are obviously linked to an oral teaching and suppose a direct, physical, contract between master and disciple. But, in the case of folk-literature, we ordinarily miss whatever is prior to the oral state-of-the-art. It does not mean that there are no ways to go back and wider, to a common treasure of inspiration which has its pan-Indian nature and its written evidences. But it means that no reference, no authoritative source book is *immediately*, neither *spontaneously*, available, to authenticate what we are listening or recording. Most often, no manuscript is available either, unless written down to order at the request of the folklorist! However, it has become now quite common to append to the manuscript collections, records and video-tapes which have suddenly hardened a fluid reality, or to publish versions of folk tales, folk dramas, or folk songs which, slowly take over from the out-fashioned popular cheap editions attributed to any prolific legendary writer.

A performance is, daily, a new and unique event, but the video-tape is fixed for ever. How many such 'transcriptions' just erase, also for ever, the particularities of the dialect... not to mention the fact that the environmental conditions of the recording are too often artificial. What is the meaning of accumulating, under the pretext of documentation, cassettes recorded by professional 'artists' in an urban studio? Some disputed views about the true nature of the so-called street-drama show how deeply the genuine development of those performing arts have already been affected and influenced by patrons and theoreticians. The very subject is controversial, but we must face our responsibilities: we build archives for the future, and we cannot misguide it with wrong labels. Perhaps, it may

prove difficult to check how genuine a document actually is, all the more so, in front of a kind of inflation in that field, while, surprisingly, more classical genres receive less attention. But we should remember one thing. We all acknowledge that the destruction of an old document is an irretrievable loss and that it is a tremendous responsibility, for the prehistorian, to excavate, because he destroys without remedy every page he reads, for ever! But are we, in like manner, aware that, when we turn to ice through a video-camera some folk performance, while we imagine we are dealing with life, our instrument gets a still, killed on the spot, also for ever?

On preservation, one has to be more precise and less lyrical. Therefore I will be extremely brief, which does not mean that the struggle to retain all our documents in the best possible conditions is not essential. The technologies of restoration and conservation are more and more sophisticated, that is to say, more and more costly. In other words, it is a matter of policy, and, in front of those who decide, the scholar and the technician feel rather hopeless. Let them happily remember that in front of the theory of conservation there are quite a few practical tips to keep on and avoid the misfortune of the Lutheran library in Halle which took thirty years to complete a wonderful catalogue, only to discover that the original documents had, in the meantime, been eaten up by cockroaches!

One more advice is borrowed from the computer: always make a back up! The cost will increase again, but we know today that we can scan any manuscript and digitalise any image. The future certainly lies in this capacity to transfer any collection of palm-leaf manuscripts on CD-ROM, but, before dreaming about the facilities offered by such a powerful instrument, to manipulate, exchange and analyse data, we must also think that the digitalisation of a single palm-leaf, now, eats up a small ordinary floppy! It means that the investment is on par with our expectations... The reconciliation of the computer with handwriting is already achieved: it is possible to customise your machine to decipher your manuscripts. Tomorrow, not only the digitalisation of manuscripts will be possible, but also comparative studies between various versions, without any fatigue for the original documents which will remain untouched after scanning...

Another fundamental problem will prevail anyway, which the computer simplifies but does not bypass, it is cataloguing. Until now, this remains the privilege of the scholar: the descriptive catalogue is the academic exercise which highlights his qualities of erudition, memory, sharpness and minuteness. Tomorrow a lot of such work will be dealt with through the computer, connected to a good data bank, and we cannot afford

nostalgia, because we have to work hard in the meanwhile. Already, we know that we are wrong if we work in insulation. Science is one and universal, and we should draw the consequences: the documentation is likely to be computerised tomorrow, if not today itself. That means that we must look for a universal unique system of description for our documents. As we know, there is still a long way to that! Nonetheless, we are aware of the existence of such attempts as Text Encoding Initiative, to enforce a somehow universal language for all the data banks, the S.G.M.L. (Standard Generalised Mark-up Language). The trouble is the continuous updating of the guidelines which, during the last four years, have already run into at least three different versions.

Before reaching this stage of universal intercommunication we are dreaming of through Internet, all the problems of our routine work will not be solved so easily. While any manuscript devoted to one single work can be catalogued as simply as a book, what about those bundles which are crammed with fragments of a few leaves each, often not even connected in any way? We can separate the fragments, dismantle the wad, provided we keep a device allowing us to reassemble it. It was certainly a crime to saw off the copper ring keeping together the leaves of the regal copper plates, as it happened in the Madras Museum, under the rule of an epigraphist, some decades ago. But with palm-leaf wads, the temptation remains, and we should resist. Because we remember what we said about the policy to be implemented at the time of collecting manuscripts. The rule is fundamental: we apply to cataloguing the same principles we have defined when collecting: we respect the initial condition of the manuscript, so that we can always retrieve its original arrangement. The indications of origin, which are a must for any catalogue, are not even enough; an evidence must be kept of the original economy of the entire collection. The problem will only increase with the future data banks; they will always have a tendency to bring together whatever they grasp, irrespective of origins, and, eventually, of property rights, dropping as negligible information what we claim to remain of the utmost importance. Such principles should be enforced also when we want to create data banks or to publish a manuscript.

'To publish' is an unspecified word which designates nebulous activities. Manuscriptology stops before the publication of the manuscript and, in Paris, the Institute of Research on the History of Texts, known as I.R.H.T., does not think that its job is to issue critical editions. However, no critical edition is possible without the critical assessment of the manuscripts and, naturally, palaeographers who decipher manuscripts also

happen to edit them. Their skill may seem to be sufficient, all the more so when there is only one manuscript available. But even then, things are not that simple! The text may be known and quoted somewhere else, anywhere in the ocean of commentaries, grammatical or otherwise, and perhaps in another literary work, edited already. All such stray references, which, according to the Indian usage, are usually not identified when and where they are quoted, the job been left to the perspicacity of learned readers, should normally be taken into account by any serious editor, and duly referred to as *testimonia*, which are probably more crucial to authenticate a reading than a rich manuscript tradition. You will immediately understand why we put so much emphasis on *testimonia* in western critical editions, if I evoke the controversies raised in India around the Pune 'critical' edition of the *Mahābhārata* and the *Harivamsa*, about passages belonging only to southern recensions, and rejected as later interpolations, though they were used and quoted by southern sources which may not be of great antiquity but are considered as quite authoritative. The debate remains opened, and can be re-activated if we extend it to any 'critical' edition of a *Mahāpurāṇa*. It shows that, even before inter-textually became the order of the day, it had been considered essential to give to a text its due place by referring to any other text which acknowledges its existence and quotes a small part of it, whatever fragmentary it might be. Recently, the Diary of Vīra Nāyakar, an Indian police officer in Pondicherry, under the French regime, before and during the French Revolution, was exhumed from the National Library in Paris and printed in Madras, from that single manuscript. The original is lost; the copy available, from Edouard Ariel's collection, is only a copy of a copy, made around 1850, and by at least two copyists. But, in fact, we know, from two independent sources, not only that another version was available in Pondicherry, but that some kind of a French translation was also made, at least for the portion dealing with the French Revolution. Further, the first chapter of the narration, which relates the siege of Pondicherry by the British in 1778, is a mere translation, very faithful indeed, of a French document rather apologetically written and printed in 1779, of which several manuscript copies exist, including in Pondicherry, with slight variations. All this information put together shows the complexity of what seemed first an elementary problem, and the conclusion is that we are well short of a satisfactory critical edition, not to mention the problems of consistency in spelling and splitting the Tamil prose of the early 19th century.

The problems will only worsen as soon as we are supposed to deal with an Indian text of which many manuscripts are available. The first

question is to locate these innumerable manuscripts and to collect them, if and when accessible. It is the first nightmare. The second one will be to examine those manuscripts and decide on their hierarchy. It is not correct just to improve upon an earlier edition, neither to select arbitrarily at its face value one single manuscript which would serve as the basis for the edition. And, after we have been able, hopefully, to decide about the main branches of the tradition and to select in each one the most appropriate material, the third nightmare arises, full of stray words, ramble, abbreviations and symbols, from the critical apparatus. The western tradition favours a positive apparatus, but a negative one, in the case of Indian texts, may soothe our task. The difficult art to give only the strictly necessary information on the history of the tradition, while enlightening the reader on the value of the text he is given to read, as well as of the readings which were not selected instead, is a painstaking discipline and cannot be mastered without tears. It is a matter of great concern that not enough attention is paid to such an ungrateful but unavoidable task when, at the very same time, everyone, in India and abroad, is so eager to create data bases of all classical and fundamental texts, without questioning the quality of the texts entered. This is like a virus in a computer: a bad edition, once entered into a scientific network spoils the very scientific essence of that network, and we can anticipate some bitter experiences from such a blind rush for lists and concordances. Already, the more discriminative scholars are definitely more choosy. Nonetheless, there is always a possibility that Gresham's law applies here also, and that the bad tools chase away the better ones.

We came back, once more, to the computer and its integration to our scientific activity tomorrow. That might have been my conclusion. But, while we were imagining a world where the laptop will replace the bundle of palm-leaves and the magnifying glass, we have also discovered that the dusty world of the manuscript collections has acquired a new dimension in the realm of social history. Great regal collection, (the Gaekwad of Baroda), learned selections of university professors (Vaiyāpuri Pillai, in the National Library of Calcutta), or modest and near anonymous wads of a village priest, all these monuments of learning find a privileged place within a new kind of studies.

Leaving aside the formerly prestigious world of the authors, people are pleased to focus on the readers, on the way they read, on the material support of their reading, on the impact of their reading on their life and habits. The most important revolution in the field is no more Gutenberg, who, by the way, has never really impressed the people of Asia who were

familiar already with a similar contraption known as xylograph! The most important technical revolution, Roger Chartier claims, is twelve or thirteen centuries older. It took place when the *volumen*, the text inscribed on rolls, was replaced by the *codex*, the book composed with joined assembled leaves, the book as we know it. We are taken back to our manuscripts, even when threatened by a 'de-materialisation' of the book into floppies and CD-ROM. And when we pay attention to the works of modern historians, we are also brought back to the central problems of the collections. From the time Daniel Mornet studied 'the intellectual origins of the French Revolution' through the inventories of many private libraries of the 18th century, till today, when so many studies, flourish, on censorship, on the 'library' as a counter power against the spiritual authority of the Church, on the crucial part played by printing and spreading books, in the construction of the modern German Realpolitik, etc., we find there many sources of inspiration for deeper scrutiny of our own manuscript material. Studies on reading practices and book-publishing have started to appear in India, namely under the inspiring model of the methodological approach of Roger Chartier. This is a clear invitation to turn towards manuscriptology with a new perspective, giving it the equitable place it deserves among the sciences which help us to build our modern vision of history.

Palm-Leaf Manuscripts in Bengali

Tusharkanti Mahapatra

1

The Bengali language owes its origin to the eastern variety of Prakrit which was known as Magadhi Prakrit in the tenth century A.D. Bengali literature also appears in the same period. But the evolution of a fully developed Bengali alphabet from the Proto-Bengali script was delayed by a couple of centuries. It was during the twelfth century A.D. that a complete Bengali alphabet was available at first in manuscripts and in inscriptions as well.¹

During this period as in the previous centuries palm and palmyra leaves were used as writing materials in eastern India and Nepal. The whole territory was then culturally integrated. The local name of palm and palmyra is 'tāl' and 'teret' respectively.

A tāl leaf is usually around 70 cms. long and 6 cms. broad and is comparatively thicker than the palmyra leaf. As it tapers gradually towards the edges more or less half of its length can be used for writing purpose. On the contrary better use of foliage is possible with teret or palmyra leaf as it is at least ten cms. longer and one cm. wider than a palm-leaf and its breadth remains almost the same upto the edges. Moreover, it is more pliable than a palm-leaf.

In palm-leaf manuscripts, as in other manuscripts also, writing was always parallel to the longer edge of the folio and the words were written without any break. Normally a reed pen (or *kalam*) was used for writing. Sometimes feathers of different birds were also used for the purpose. But a stylus was never used in Bengal for writing a manuscript. Usually black and occasionally red ink were used. As writing purposes could be served better with the palmyra-leaf people preferred to use this type of leaf although palmyra trees are seldom available in Bengal or its adjacent areas. The exquisitely illustrated manuscripts with the Pāla style of painting² are paramount among Indian art and these are mostly palmyra leaf manuscripts. Twenty five dated and illustrated manuscripts³ written between the second half of the tenth century and the end of the twelfth century, have been available so far. Another three Mss of the similar type

belong to later period. Out of these twenty light a Mss twenty six are palm or palmyra-leaf manuscripts. This indicates the popularity and importance of palm-leaf as a writing material in those days.

Such a tradition, of course, had been developed long before this period. The word '*patra*', referring to a 'leaf' or 'page' of the manuscript, reveals the fact that leaves and the barks of different trees were used as writing materials in the early stage of writing in India. The *Dhammapada* of the second century A.D., the *Bower Mss* of the fifth century A.D. and the *Bākhṣālī* Mss. testify to the popularity of birch bark in those days. On the other hand, the fragments of Indian palm-leaf manuscripts found in *Turfan*,⁴ The *Hariuzi* manuscripts of the sixth century A.D.,⁵ the manuscripts of the *Kubjikāmatam* written in later Gupta characters in the seventh century,⁶ tend to show the use of palm-leaf all over India during the same period. The illustrated manuscripts of the *Aṣṭasāhasrikā Prajñāpāramitā* and the *Pañcarakṣā* prepared between c. 10th and the 12th centuries A.D.⁷ bear testimony to such a long tradition.⁸ Proto-Bengali script and its predecessor *Kutila lipi* also appear in some of these manuscripts.

But the golden age of illustrated manuscripts of Bengal disappeared gradually with the Turkish invasion of eastern India during the twelfth and thirteenth centuries. Manuscripts were destroyed with their main repositories, the Buddhist monasteries,⁹ and preparation of costly manuscripts lost royal patronage and the scribes and the artists suffered neglect.¹⁰

During this period of social unrest and political change a few of the illustrated manuscripts were shifted to Nepal and even the technique of preparing illustrated manuscripts was transplanted there. We are fortunate that Nepal 'is very favourable for preservation of Mss, and it seems not to know what decay is', as observed by Haraprasad Sastri.¹¹ As a result, at least some of the rare and rich collection of manuscripts have come down to us without any major damage.

The period of decadence continued till the middle of the fifteenth century. Only three dated illustrated manuscripts that bear the Pāla style of painting and copied in 1289 A.D., 1446 A.D. and 1455 A.D. respectively have been available so far. Although representing a superb art tradition they fail to satisfy us owing to poor artistic qualities.

The now availability of a large number of palm-leaf manuscripts does not signify that people were reluctant in preparing manuscripts. As a manuscript then served the purpose that a book does today, copying of the

earlier texts was essential. But the laborious process of preparing a long-lasting writing material was then either forgotten or neglected.

As a substitute, shortcut methods were followed. But such procedures could not help the manuscripts to survive especially when the humid weather of Bengal became a major factor for their early decay. Palm-leaf as a fragile substance suffered much in this unfavourable situation and as a result the number of available manuscripts of this period is negligible.

Most of the available Bengali manuscripts were copied during the seventeenth and eighteenth centuries. Palm-leaf manuscripts of this period are greater in number than those previous two periods but much less in comparison to the paper manuscripts available in this period. The condition of these palm-leaf manuscripts is also not satisfactory as most of them are worm-eaten or damaged. Restoration of these manuscripts is already becoming difficult within only two or three centuries of their preparation. Further delay may cause their final destruction.

The reasons for the availability of a lesser number of palm-leaf manuscripts are mainly due to the introduction of paper for manuscript-writing, excessive humidity, absence of proper curing of the leaves before their use as material for writing a manuscript, improper method of preservation of the manuscripts and disrespect for hand-written texts by the owners of the manuscripts after the introduction of printing press in Bengal.

Paper was known to the Bengalis from a much earlier period through the cultural relation with China and Nepal. The copy of the Buddhist tantric text *Pañcarakṣā* (copied in 1105 A.D.) is one of the earliest extant - specimen of paper manuscripts found in eastern region of India.¹² But it was after a pretty long time that paper could become a popular writing material for manuscripts. Orthodox Hindus did not encourage writing religious texts on paper probably for its foreign origin¹³ and traditional use of palm-leaf kept its popularity unhindered for a long time. Moreover, paper was then scarcely available.

Paper came to India in bulk, from the Middle East, especially from Persia, from the second half of the thirteenth century during muslim rule in the country. The Jain traders of Gujarat and north-eastern India as well imported paper and blue pigment. Within a century the Jain religious texts were copied on paper. Imported blue colour came to be used in greater abundance in the illustrated Jain manuscripts from about the fifteenth century. As a result a remarkable change took place in the history of Indian miniature painting and illumination of manuscripts. The miniature painting

on illustrated manuscripts could then expand vertically which was impossible in case of palm-leaf manuscripts due to the shortness of (around 6 cms) the leaves. On the other hand, traditional red background of each illustration was replaced by blue colour using imported blue pigment¹⁴. Introduction of paper and blue pigment helped to evolve new technique in India miniature painting influenced by foreign, especially Persian elements.

During the Moghal rule in Bengal¹⁵ paper was produced in this state commercially¹⁶ and became easily available. Naturally, a scribe was interested in using paper at least to avoid the troublesome process of curing a palm-leaf. Moreover, palm-leaf is not suitable for all kinds of texts. A long poem or an elaborate commentary needs more space than what is available on a palm-leaf. Therefore, gradually palm-leaf was replaced by paper. But following a long tradition the scriptures (mainly the Sanskrit) and the texts on medicine and astrology, were continued to be copied on palm-leaf.

Humid weather of Bengal is always a problem to the preservation of any kind of writing material. The maximum humidity in air sometime becomes 98% or even more than that. A palm-leaf which is fragile by nature and is prone to be attracted by insects would not last long unless it was properly treated.

The magnificent method of curing a palm-leaf by the ancient scribes to retain its appearance almost unimpaired even after a millennium was unknown to the scribes of later period. Even the materials used by the ancient scribes for illustrating the manuscripts were mostly either insecticides or repellents. *Haritāl* (Arsenic Trisulphide), *Tnute* (Blue vitriol), *Hirākos* (Green vitriol), *Sindur* (Mercuric Sulphide), *Mete Sindur* (Lead Oxide), *Lākshā rasa* (Lac dye), *Nim atthā* (Margosa gum) are some of such familiar materials.

But the scribes of later periods were also aware of brittleness and putrefaction of a palm-leaf. At least they knew the fact that only a seasoned palm-leaf could be used for writing a manuscript. Therefore, they could not avoid curing of a palm-leaf before it was used for the said purpose.

The common method of curing a palm-leaf was to dip the green leaves (not much tender or old) into the muddy water of a pond with the stem for some days depending on the weather and season. Then the leaves were taken out of water, separated from the stem, cleansed and fastened together in small bunches and hung for dripping. Leaves were separated again and kept under shade to make them dry. If on examination it was found that the leaves were still unsuitable for writing manuscripts the process was

repeated. Otherwise, each side of the sufficiently strong and flexible leaves was made smooth by rubbing it against the polished surface of a brick, stone or conch. Finally, the leaves were cut according to a usable or desired size and both of their sides were covered with tamarind paste. A paste of boiled tamarind seed not only made the leaves more pliable and long-lasting but also protected them from the attack of insects and resisted unwanted spread of ink on their surface. A paste of boiled rice was normally avoided as it dampened the folios of a manuscript to bring about early growth of fungi on the surface of the folios and attracted insects. Moreover, Hindu religious restrictions never permit any sort of touch of boiled rice with sacred or any kind of reading material.

A slightly different method of curing palm-leaves involved not only the process of separating the leaves from the stem but also one leaf from another. The next step is to keep only the selected leaves under a shade for two or three days to remove their greenishness. The leaves then were tied up in small bunches to be dipped into a pond for a suitable period of time. After taking the leaves out of water when the process of dripping was over the leaves were separated and dried under a shade. The same procedure, was then followed to make them ready as folios of a manuscript. Sometimes, the folios were dressed with a little arsenic trisulphide or copper sulphate solution (commonly known as *Haritāl* and *Tnute* respectively) to protect them from insects.

A better result could be had if instead of dipping the folios into water they were boiled in water for some time after removal of the greenishness of the leaves.

A more effective method of preparing a long-lasting folio was to boil the leaves in a mixture of water and cowdung and not just in water. The folios of a single copy of palm-leaf manuscript are always equal in size but the folios of different manuscripts vary largely in their sizes. The smallest of them, so far available, is only 6 cms. long¹⁷ whereas the largest one is 87 cms. in length¹⁸. The height varies from 3 cms. to 6.5 cms.

Preservation of such strips was difficult. Probably through the trial and error method a tradition developed to keep the folios of a manuscript under tight binding to protect them from dampness, water, oil, crumbling and insects. According to the length of a manuscript one hole at the middle or two holes on either side of each folio were made to pass a string through them to keep the folios together. The folios were put within two wooden covers commonly known as *pāṭā* having holes at the same point of the folios. The folios and the wooden covers were threaded on cords and

wrapped up in a piece of coloured cloth, usually red, and tied up tightly with a tape attached to an end of the cloth or *khero kāpad*. Instead of wooden covers sometimes threaded palm or date-palm leaves were used as covers.

Such tradition was not followed strictly in case of palm-leaf manuscripts of later periods. Folios without any hole on them were tied up with two covers by a cord and then wrapped up in a coloured cloth. Such procedure causes inconvenience at the time of reading as the folios may be misplaced.

Dry tobacco and margosa leaf, black cumin and red pepper were also used as good repellents. While margosa leaves and red pepper were kept in direct touch with the folios of a manuscript black cumin was placed within a small piece of cloth. To protect the manuscripts from white ants a mixture of kerosene and camphor was applied to the holes made by the insects. The wooden covers of a manuscript were normally made of teak, sal, margosa or jacca wood as these are not affected easily by wood mite or any other insects. Moreover, the piece of cloth used to bind a manuscript was either red or blue as these colours repel insects.

Unfortunately, the manuscripts, as holy books, were worshipped with the paste of sandalwood, water etc. by the owners through generations causing much damage. Sometimes they were placed in a niche or in the dark corner of a room so that none could touch them easily. But the fact that these were left untouched for long periods gave insects the opportunity to destroy them.

After the introduction of the printing system when the texts so long contained in the manuscripts were being printed from the early nineteenth century - manuscripts became neglected. Advancement of Western education also did not favour hand-written texts. Ultimately, they were considered by a large section of people as a useless ancestral property and at the time of shifting of residence, during flood and other natural calamities, or after being worm-eaten they were either left reluctantly or were thrown in the Ganges or alternatively in a canal or a tank. Therefore, the number of palm-leaf manuscripts that have come down to us is not at all satisfactory.

It is to be noted that in spite of the disadvantages as mentioned above there are still a good number of palm-leaf manuscripts in private collections in the remote villages. No serious attempts have however been made to collect and preserve them.

2

Available palm-leaf manuscripts may be classified in two categories broadly:

1. Bengali texts written in Bengali character.
2. Sanskrit texts written in Bengali or Dēvanāgarī character.

Palm-leaf Bengali manuscripts written in Bengali script contain normally subjects relating to Hindu rituals and religion and occasionally texts on medicine and astrology. Mainly palm-leaf was used in writing these manuscripts as palmyra-leaf was not available in Bengal.

Hindu scripture has an inseparable relation with Sanskrit language. The Sanskrit scholars were then mostly teachers of the *toles* and *catuspāthies* run by them. Naturally, they were keen on preserving those manuscripts of their personal collections. Therefore, curing of a palm-leaf before writing a manuscript was their practice. Paper was then available in a large scale as it was produced commercially. But a palm-leaf was never a marketable product and a scribe or an owner of a manuscript had to cure a palm-leaf all by himself before its use.

A scribe of Bengali manuscript or the owner of it was normally not sufficiently acquainted with the curing method of a palm-leaf or with the preservation of a manuscript as against a scribe of a Sanskrit manuscript. As a result Bengali palm-leaf manuscripts have been lost in a large number and the condition of the few available manuscripts is far from satisfactory. On the contrary, available palm-leaf Sanskrit manuscripts copied in the same period are comparatively greater in number and atleast some of them are in a good condition.

3

Manuscript collection in modern times was started in the nineteenth century by the English administrators posted in the areas adjacent to the Indian territory. The individual effort made by Mr. Brian Houghton Hodgson, in this regard, is remarkable. He, during his sojourn in Nepal, which lasted for twenty one years¹⁹, collected 381 bundles²⁰ of Sanskrit, Buddhist and Nepalese texts from Nepal and two sets of *Bks'gyur* and *Bstan'gnur* from Tibet and distributed them to the Asiatic Society, Calcutta, the Royal Asiatic Society, India office Library and Bodleian Library, England and to the Society Asiatique and Bibliotheque Nationale of France.

Thus the striking tradition of Indian palm-leaf and illustrated palm-leaf manuscripts and other texts as well became known to the European Orientalists and was appreciated by them greatly.

Radhakishen the son of Madhusudan, the priest of Maharaj Ranjit Singh, wrote a letter in 1868 to Sir John Lawrence, the then Viceroy of India requesting him to take necessary steps for the collection of Indian manuscripts and in response to that letter the Government of India sanctioned a sum of Rs.24,000/- annually for the purpose. Eastern India's share was Rs.3,200/-. The amount was given to the Asiatic Society and it was utilised initially for the purchase of Sanskrit manuscripts. Of course several Bengali manuscripts were also being collected with the Sanskrit manuscripts. Collection of Bengali manuscripts by the Society got impetus during 1893-94 when Haraprasad Sastri, on behalf of the Society, actively helped Dinesh Chandra Sen for the purpose.

Manuscript collection of the Bangiya Sahitya Parishad started in 1894 and a greater number of the manuscripts came as presentation. Personal collections of the illustrious Bengalees like Rabindranath Tagore, Acharya Prafullachandra Roy, Deshbandhu Chittaranjan Das, Abanindranath Tagore, Rajendralal Mitra, Rakhaladas Banerjee enriched this collection of manuscripts.

Before the inception of Visva Bharati, the educational institution founded by Rabindranath Tagore in 1922²¹ at Santiniketan in the district of Birbhum, Rabindranath who was deeply associated with the activities of Bangiya Sahitya Parishad took part in collecting manuscripts for the institution. But after 1922 he became interested in collecting manuscripts for Visva Bharati University.

Collection of manuscripts in the University of Calcutta started from the beginning of the present century. Sir Asutosh Mukhopadhyay as the Vice-Chancellor of this University took great interest in setting up a rich manuscript library of the University with manuscripts of different languages and scripts. In this he received support from Dinesh Chandra Sen atleast in the collection of Bengali manuscripts.

Jatindramohan Bhattacharya, being inspired by Dinesh Chandra Sen collected a good number of Bengali and Sanskrit manuscripts from different places of Bengal. He donated his entire collection of manuscripts (about six thousand) to the National Council of Education, Bengal. The collection is at present known as the *Jatindramohan Sangrahasālā*.

The '*Gauranga Grantha Mandir*', Pathbari, Calcutta is a notable repository of the medieval Vaisnava texts having 1100 titles.

The Bangiya Sahitya Parishad, Visnupore Branch, has several thousand Bengali and Sanskrit manuscripts which have been collected mainly from the district of Bankura.

The Burdwan University, the Rabindrabharati University and the Uttarbanga University also have their manuscript libraries.

In the Tripura state Library there are a good number of manuscripts. In Bangladesh notable collections of manuscripts are available at the Dacca University, the Rajshahi University and at the Bangla Academy. The British Museum, the India office Library and the American Oriental Society have several Bengali manuscripts in their possessions.

4

The *Caryāpadas*, composed between the 10th and the 12th centuries A.D., are the oldest evidence of Bengali literature. The single extant specimen of the poems copied on palm-leaf in c. 14th century in old Bengali character has been available in the National Archives of Nepal. This is an incomplete manuscript having 64 folios. Page Nos. 35 to 38, 66 and 70 are missing. Size of folios is $12\frac{1}{4}'' \times 1\frac{7}{8}''$ and there are five lines on a page written on both sides. The manuscript contains 46 complete and one incomplete caryās or mystic songs composed by twenty-three Buddhist Siddhācāryas and their commentaries by Muni Dutta written in Sanskrit language but in Bengali script. The condition of the manuscript is good. The poems edited by Haraprasad Sastri were published by the Bangiya Sahitya Parishad in 1916.²²

The Calcutta University manuscript library has three palm-leaf Bengali manuscripts which are partly damaged. All the manuscripts are incomplete and the name of the author(s) and the scribe(s) and the title(s) of the poems are not known.

Only one folio of the Ms.No.9043 has been available (folio No.2). Size of the Ms. is 20 cms. 5 lines on a page written on both the sides. The text refers to the glory of Lord Krishna.

Ms.No.9044 contains three unmarked folios. The size of the Ms. is $26\frac{1}{2} \times 3\frac{1}{2}$ cms. There are 4 lines on the page written on both the sides.

Ms.No.9045 retains 28 unmarked folios. The size of the Ms. is 20 × 5 cms ; 3 lines on a page written on both the sides. The text was copied in 1191 Bengali era which corresponds to 1784 A.D.

The condition of the palm-leaf Bengali manuscripts of the Asiatic Society is not as bad as the Calcutta University collection. The description of the two manuscripts as available in the 'Descriptive Catalogue of the Vernacular Manuscripts' (Vol IX) of the Asiatic Society is as follows:

Ms. No.4262 : *Kālikāmaṅgala*

'Substance, palm leaf, 15 × 1½ inches. **Folia 93.** Lines: 2,3 on a page. Extent in slokas, 900. Character Bengali. **Date** Saka 1755 (c.1833 A.D.) B.S. 1239 (c.1832 A.D.) Appearance, **rotten**, written in red ink, complete.'

Ms.No.5449 : *Samjātapaddhati*

'Substance, palm-leaf. 15 × 1½ inches. Folia 88 by counting; lines 3 on a page. Character Bengali of the 18th century. Appearance discoloured.'

The *Kālikāmaṅgal* poem was copied by the scribe Gopichandra Sarmanah of the village Binghar and he was employed by Krishnamohan Sarmanah for the job. Goddess Kali is glorified in the poem as in the other Maṅgala poems of the medieval Bengali literature. But the peculiarity of the narration is that love of Vidyā, a princess, and Sundar, a prince, as depicted in the poem is not mystical and has nothing ideal or spiritual in it. The story of romantic love is borrowed from Sanskrit and is given local colour.

The craze of the Bengali writers in the seventeenth and eighteenth centuries was to glorify the folk deities and to compose *Maṅgala* poems on them following the established format of the earlier popular *Maṅgala* poems. Some such poems have been copied on palm-leaf.

Dharma or the sun god is one of the folk-deities of Bengal. The poem *Samjātapaddhati* contains in detail the rituals about the worship of Dharma.

The first five folios of the poem refer to the sacrifice of a goat. The next four folios contain mantras to be chanted during Dharma-worship. In the later four folios the method of such worship is narrated. The last seventy five folios contain details of the rituals of the Dharma worship.

There are some *Vēdic*, *Purānic* and non-Aryan elements in the Dharma-cult as in other folk-deities of Bengal. At the same time it includes - customs and manners in vogue in the royal court of Bengal in the pre-Muslim period as its special feature. Moreover, the method of Dharma worship informs us about the rites inseparably related to the principal occupations of the villagers.

It is interesting to note that the priest selected for Dharma worship comes from a backward class of society.

In the collection of the Visva Bharati University there are two Dharmamaṅgala poems written on palm-leaf entitled '*Sri Dharmapurāṇa*' and *Dharmamaṅgala* respectively.

Ms. No.129 *Sri Dharmapurāṇa* is an incomplete manuscript. Number of available folios is 94 and their size $25\frac{1}{2} \times 2$ "; lines on a page, 4 and 3; written on both the sides. The Ms. is worm-eaten. The author of the poem is Mayurbhatta and the scribes are Kuḍārām Paṇḍit and Ganesh Paṇḍit. The Ms. was copied between 1151 and 1160 Bengali eras. In the *Bhanitā* or the poet's personal address the names of Rāmāi Paṇḍit, Rām Das, Srirām Paṇḍit, Dvija Sri Rām Paṇḍit, Paṇḍit Dvija and Paṇḍit Rām are available. This shows that different episodes of the poem have been composed by different poets and to popularise the poem the name of Mayurbhatta, an eminent poet of the Dharmamangala, has been mentioned by the compiler.

Ms.No. 131 *Dharmamaṅgala*, is also an incomplete poem. The total number of folios is 52; size $15\frac{1}{2} \times 1\frac{1}{4}$ ", lines on a page are 3; condition of the Ms. is not good; author of the poem Mayurbhatta. The *Bhanitā* includes the names of Paṇḍit Rām, Sri Kavibhuṣan, Sri Rām Paṇḍit, Paṇḍit Dvija. The line, 'Dvija Paṇḍit dvārā, gāyan dvārā saṁgit vidyā pracāraṇ adyārambha dvādas dibas paryyantam' etc. reveals that Dvija Paṇḍit was a *gāyan* or folk-singer. It might so happen that he compiled different episodes composed by different poets to give the poem its present form.

From about the sixteenth century A.D. the folk-deities slowly infiltrated into the upper classes of the Hindu society. Thus Dharma became a much popular folk-deity in the Rāḍha or the south-west region of Bengal. As a result, the fable about him was copied by the poor literate folks also and it was sometimes on palm-leaves prepared by themselves as paper was considered costly.

The popularity of the Manasā-Cañḍī-Dharma fables inspired the minor poets to compose narrative poems on local deities also. Ms. No.1521 of the Visva Bharati University Collection, the *Rāla Durgār Kathā*, contains such a poem. Goddess Durga is well-known to the Indians but Rāla Durgā or the Durga of Rādhā region of Bengal is a local deity quite different from the goddess Durga or Cañḍī. The fable presented in the poem owes almost nothing to the Puranas or any other sacred scripture excepting a short description in the introductory statement which was added to prove that the goddess is identical with the *purāṇic* goddess Durga. But the fable has no connection with the traditional legends and myths current about Durga or any other goddess of Bengal.

The complete text of the *Rāla Durgār Kathā* is available. The total number of folios of the Ms. is 24; size 15 × 1¼". The name of the author is unknown.

One of the interesting manuscripts in the Visva Bharati University collection is the Ms.No.1917 entitled *Kākacaritra*. It reveals a method of knowing what is destined to happen from the number of crows of a crow. The system is not new to the Indians. In the *Śākunśastra* written or compiled by *Vasantarāja* the method is described vividly. But the question-answer form in a Bengali-Oriya mixed language has made the text interesting and valuable. A few citations may not be impertinent:

Page - 1 a :	E rājye rājā hoiba ki nā hoiba ²³	Rājā hoiba-1 Grāme thile manda - 2 E lok Karyya Koriyā āsiba - 3 Deśe rājā rohiba - 4
Page - 37 a:	Ihār garbha phaliba ki nā phaliba? ²⁴	Ihār garbha phaliba - 1 E byādhi pāper - 2 E upadrab bhala - 3 E piḍā devatār - 4

This is an incomplete manuscript and the number of folios is 43; size 8 × 1½". The names of the author and the scribe are not known. The other palm-leaf manuscripts of the Visva Bharati University collection are as follows:

Ms. No.	Title of the Ms.	Author	Complete/ Incom.	No. of folios	Size
767	Caṇḍikāmaṅgala	Dvija Nārāyan	Inc.	1	8½" × 2½"
1519	Vivāha Padhati	-	Comp.	23	12½" × 1½"
5527	A letter	-	-	1	10 × 1½"
6311	Andha Munir Pālā	Dvija Laxman	Comp.	96	15" × 1¾"
6404	Dāker Vacan	-	Inc.	27	7¼" × 1½"
6440	Mantrās	-	Inc.	98	16" × 1½"
6444	Rāmchandra Janmakathā	Sristidhar Devsarmā	Comp.	23	10" × 1½"
6475	Sricaitanya Viracita	-	Comp.	34	10" × 1½"
6817	Rāmāyaṇa	Kṛttibāsa	Inc.	200	22" × 1½"
7020	Pañjikā of the 1715-16 Saka era	-	Inc.	27	9½" × 1½"

Out of the 7065 Bengali manuscripts of the Visva Bharati University only 14 manuscripts have been written on palm-leaf. All these manuscripts are more or less in a decaying condition and they require immediate and proper preservation.

Not a single copy of the Palm-leaf Bengali manuscripts is available in the collection of the Bangiya Sahitya Parishad, the Jatindramohan collection of the National Council of Education, Bengal, the Rabindra Bharati Univeristy, the Burdwan University, the North Bengal University. In the printed catalogues of the Tripura Government collection and the Barendra Research Museum, Bangladesh there is no mention of such collection.

The number of palm-leaf Sanskrit manuscripts collected in any repository is more or less satisfactory. In the collection of the Bangiya

Sāhitya Parishad and of the National Council of Education not a single copy of the palm-leaf Bengali manuscript is available but there are 68 and 30 palm leaf Sanskrit manuscripts respectively in these two collections (list of Mss. is enclosed as Annexure A & B).

Manuscripts Nos. 1230, 1231, 1232 and 1235 of the Bangiya Sahitya Parishad deserve special mention for length and the number of folios. The Mss. No.1230, 1231 & 1235 contain the text of the *Bhāgavata* (Skandhas 1st to 4th respectively) and their available folios are 1-180, 182-313; 1-260 and 1-164, 166-186 respectively. The size of the Mss. is 85×5cms. 87×6½ cms and 83×4 cms. respectively. Ms.No.1232 present the *Mahāhārata* (Ādiparva) in 305 Folios of 84×5 cms size. Ms.No.1231 was copied probably in 1614 Śaka era which is corresponding to 1692 A.D. The other three manuscripts bear no dates of copying. They appear to be copied in the same period.

The Calcutta University has the largest collection of Bengali manuscripts. But out of about ten thousand titles only three are palm-leaf manuscripts. As against this the collection contains about 300 palm-leaf Sanskrit manuscripts written in Bengali and *Dēvanāgarī* characters. At least 20 of them are written in Oriya script. Moreover, there are 9 illustrated palm-leaf manuscripts and 5 etchings. The illustrated manuscripts include two copies of each of the Buddhist texts, the *Pañcaraksā* (copied in the 12th and the 13th centuries A.D.) and the *Prajñapāramitā* (copied in the 14th or 15th century and in 1570 A.D. respectively) collected from Nepal. The other illustrated manuscripts contain the texts of the *Gitagovinda*, *Bhāgavata*, the *Kāmasūtra* and archaeology written in Oriya script. The etchings collected from Orissa present the *Rāmāyaṇa* in 2000 folios, the Jagannath temple, the Kṛṣṇalīlā and the Coronation of Rama. An illustrated manuscript of the *Rāmāyaṇa* has been collected from Bali islands. A copy of the poem *Bhāgavatapurāṇa* is worth-mentioning for its size (77×7 cms), number of folios (510), date of copying 1610 A.D. and for calligraphy.

By the richness and variety of its collection the Asiatic Society ranks among the major few manuscript libraries of the world. The extensive collection of the society covers most of the Indian languages and scripts and some Asian ones²⁵. As might be expected, the collection of palm-leaf manuscripts of the society is also outstanding. Mention may be made of some of them (excepting the first one all these Mss are illustrated. Ms. No A15 deserves special mention for its 37 exquisite illustrations):

Ms.No.	Title	Size	No. of folios	Language/ script	Copied in A.D
G 8329	Kubjikāmatam	-	Mentioned in page No. 2	Sanskrit/ later Gupta	c. 7th cent.
G 4203	Aṣṭasāhasrikā Prajñāpāramitā	15 × 2½"	293	Newari	c. 1148 A.D.
G 9973	-do-	22½" × 2"	211	Newari	1120 A.D.
A 15	-do-	-	186	-do-	1071 A.D.
G 4713	-do-	21½" × 2¼"	179	-do-	981 A.D.
G 9989C	-do-	21½" × 2"	11	-do-	c.11th cent.
G 4078	Pañcarakṣā	-	136	Kutilla lipi	-
B 35	-do-	-	200	-	1265 A.D.

Mm. Haraparasad Sastri was of the opinion that the Ms. *Kubjikāmatam* 'was copied in the sixth century but it might have been a century later'.²⁶ As the accepted date is 7th century A.D. if we accept the view of Prof. Ahmed Dani regarding the date of the Horiuzi Mss.²⁷ *Kubjikāmatam* becomes older than the Horiuzi Mss. and should be considered the second oldest palm-leaf manuscript after the Turfan Mss. Several manuscripts on the same Buddhist tantric text have been found in Nepal and the literary activity of the religious school gradually ceased after that period.

The Ms.No.9989A presents the Kutilla lipi and three illustrations of the Tantric deities. Description of 13 palm-leaf Oriya manuscripts may be available in the Descriptive catalogue of the vernacular Manuscripts (Vol. IX) of the Asiatic Society. (list enclosed as Annexure C).²⁸

6

Cataloguing of the manuscripts of the Calcutta University and the Asiatic Society which was discontinued for a long time is in progress. Therefore, it needs sometime more to get all the essential information about the palm-leaf manuscripts preserved in these two institutions.

The Asiatic Society has so far published three volumes of catalogue of Bengali manuscripts (in 1941, 1952 and 1977), the Bangiya Sahitya

Parishad, four volumes (in 1367, 1391 and 1399 Bengali era) and the Calcutta University, two volumes (in 1940 and 1964) containing descriptions of 627, 1255 and 6927 manuscripts respectively. The three volumes of the Descriptive catalogue of the Calcutta University (published in 1926, 1928 and 1930 respectively) present descriptions of 1218 titles only.²⁹ Tabular catalogue of all the manuscripts of the Visvabharati university and their descriptive catalogue (6 volumes) have been published. The Bangiya Sahitya Parishad, the Gauranga Grantha Mandir and the Jatindramohan Samgrahasala have enlisted all the Bengali manuscripts of their collections. Still it is a fact that a good number of Bengali manuscripts preserved in different libraries remain uncatalogued.

7

To protect the palm-leaf manuscripts from natural decay and for their proper restoration as well as cataloguing of the manuscripts is essential. Cataloguing helps primary dusting of the folios. At the time of preparing a catalogue when the folios are separated from one another dusting of the folios and primary investigation about the condition of the folios become inevitable. The process of cataloguing helps us to know the actual number of manuscripts kept in a bundle of Mss. or within two wooden covers and the nature and extent of damage already done by the insects to each of the folios of a manuscript so that remedial procedures may be taken up easily. During separation of the folios they are made free from the visible insects also. Moreover, when the folios come in contact with fresh air growth of fungi and attack from insects get reduced considerably.

National Archives may be requested for financial assistance for the purpose. A team of experts may visit the private repositories to guide the authorities properly especially when they fail to send their representatives to join the workshop.

Co-ordination should be planned between institutions like the State Archives, the Asiatic Society, etc., who have the units for conservation, and other manuscript libraries suffering from the problems of preservation and restoration of manuscripts. Institutions already equipped with essential facilities may be given financial help to offer training to the persons associated with manuscript libraries and to extend necessary help to restore the damaged manuscripts. Microfilming of all the palm-leaf manuscripts should be done. The manuscript libraries and the private repositories having more than one hundred manuscripts should be provided with a

fumigation chamber. Indigenous system of preservation should be followed in the libraries not properly equipped with scientific preservation. A training in this regard should be arranged for the Curators of small libraries with the financial assistance from the Government.

Moreover, financial assistance may be given to different manuscript libraries for the preparation of descriptive or atleast tabular catalogue of the palm-leaf manuscripts possessed by them.

Much has been done in relation to the collection of palm-leaf manuscripts from the houses of the country folks or from the private repositories and much is yet to be done in this regard. But it is alarming that in most of the manuscript libraries restoration of the damaged manuscripts is yet to be started. Facilities for scientific preservation of the manuscripts may be a costly affair but if we fail to spend the minimum amount required for the preservation and restoration of these invaluable records of our history, heritage and culture, we will invite final destruction of a fair number of them.

ANNEXURE "A"

BANGIYA SAHITYA PARISHAD Palm-leaf Mss Collection

Acc.No.	Title	Folio Nos.	Complete/ Incomplete	Size in cms.	Copied in Saka era	Condition
1	2	3	4	5	6	7
26	Srāddha Pradip	73	Inc.	38 × 3	1746	-
33	Bhāgavata (10th Skandha)	231	Comp.	-	1474	Dilapidated
576	Siddhānta Vindu	45	Comp.	-	-	-
749	Bhāgavatoitā	97	Comp.	-	1640	-
750	Commentary on the Mahābharata	-	-	-	1609	-
751	Mahā Nāṭaka	-	Comp.	-	1619	-
1048	Manusamhitā	151	Comp.	-	-	-

1	2	3	4	5	6	7
1049	Mantra Vyākhyān	1-4, 6-92	Inc.	37 × 3	1709	-
1052	Commentary on Mārkaṇḍeya Candi	65, 67-73	Inc.	-	-	-
1053	Rājvallabha	53 + 9 folios	Comp.	42 × 3	1576	-
1054	Srāddhapaddhati	2-111	Inc.	-	1576	-
1055	Bhāgavata Bhāvārtha	1-32, 34-109, 120-144	Inc.	-	1576	-
1056	Illegible	-	-	-	-	Rotten
1058	Sat-kāraka Prākaraṇa	59	-	-	-	-
1059	Kumār Sambhava	1-58	Inc.	30 × 3	-	-
1060	Durgāpujā Paddhati	34	Inc.	-	-	-
1061	Kṛtya Viśeṣ Paddhati	1-26, 6-14, 2-3+4 folios	Inc.	42 × 3	-	-
1062	Asaṅga Rūpa	22-33	Inc.	37 × 3	-	-
1063	Not known	1-21, 1-2	Inc.	38 × 4	-	-
1064	Graha yoga Prayoga Tatva	26	Comp.	31 × 3	1730	-
1065	Commentary on Mārkaṇḍeya Purāṇa	34	Inc.	-	-	-
1066	Jalāsaya Pratisthā	2-32	Inc.	-	-	-
1068	Syāmā Stotra Kavaca	24	Comp.	23 × 3	-	-
1069	Title not known	-	-	-	-	-
1172	Rāmāyana (Ādikāṇḍa)	83	Comp.	69 × 5	1661	-
1173	Rāmāyana (Ādi Kāṇḍa)	114	Comp.	-	-	-

1	2	3	4	5	6	7
1230	Srimadbhagavata (1-9th Skandha)	1-180 182-313	Inc.	85 × 5	-	Worm-eaten
1231	Srimadbhāgavata 10th - 12th Skandha	1-260	Inc.	88 × 6½	1614(?)	Worm-eaten
1232	Mahābhārata (Adi Parva)	305	Comp.	84 × 5	-	-
1233	Mahabharata (Bhismaparva)	210	Comp.	65 × 5	-	-
1234	Māhābhārata	1-270, 281-301, 303-323, 331-356, 368	Inc.	-	-	Worm-eaten
1235	Bhāgavata (1-4 Syandhas)	1-164, 166-186	Inc.	83 × 4	-	-do-
1236	Brahmapurāṇa	-	Inc.	75 × 5	-	-do-
1241	Kālikāpurāṇa	168	Comp.	60 × 6	-	-
1527	Prāyascitta Viveka	161	Comp.	-	1681	-
1528	Chāndogya Mantra Bhaṣya	-	Inc.	-	1676	-
1529	Bhabadeva Paddhati	72	Comp.	-	-	-
1562	Kṛtya Tattava	79	Comp.	40 × 6	1863	-
1564(a)	Tithivveka	97	Comp.	38 × 5	-	-
1564(b)	Tātparyā Dipika (Commentary on Tithiviveka)	38-9	Comp.	38 × 5	-	-
1565	Sudrakadohah	3-56, 59, 60, 62-70	Inc.	30 × 3	-	-
1627(a)	Samskritya Muktāvali	55	Comp.	38 × 5	1654	-
1627(b)	Graha Bhavabānam	4	Comp.	-	-	-

1	2	3	4	5	6	7
1674	Chāndogya Parisista Prakās	99	Comp.	41 × 5	1676	-
1678	Amarakoṣa	1-98 1-111	Inc.	35 × 5	1466	-
1679	Amarakoṣa	95	Comp.	36 × 5½	-	-

ANNEXURE "B"
JATINDRAMOHAN COLLECTION
NATIONAL COUNCIL OF EDUCATION; PALM-LEAF MSS.

Acc. No.	Title	Folio	Complete/ Incomplete	Size in cms.	Copied in	Con- dition
1	2	3	4	5	6	7
3054	Devimaṇḍala	2	Inc.	21½ × 3½	-	-
3170	Markaṇḍeya Purāna	1	Inc.	21½ × 3	-	-
3119	Durgotsave Mantra	6	Inc.	29 × 3	-	-
3329	Satruveli	2	Comp.	26½ × 3½	-	-
3342	Vivāhavidhi	29-32.33 38 + 1	Inc.	17 × 3	-	-
3354	Pujāvidhi	5	Comp.	29 × 3	-	-
3355	Yogavāsisthasārtikā	35	Comp.	38 × 4½	-	-
3357	Kātantravṛtti	1-55, 56, 65 + 2	Inc.	38 × 3	-	-
3358	Vratapratisthavidhi	27	Comp.	37½ × 3	-	-
3359	Durgotsavaprayoga	85	Inc.	31 × 4	-	-
3361	Prasasti vandanam	87-89 91-95+2	Inc.	31 × 3½	-	-
3362	Kātantravṛtti Pahjika	28	Inc.	38 × 4	-	-
3363	Commentary on Kalāpa Vyākaraṇa	67	Inc.	38 × 4	-	-

1	2	3	4	5	6	7
3364	(a) Yayrvediya Vṛsotsarga	-	-	32 ½ × 3	1279 Bengali era	-
	(b) Vivāhapaddhati					
	(c) Sāntikarya					
3365	Caṇḍi	1-71+4	Comp.	26 × 4	1725 saka	-
3373	Rāmacarita	1	Inc.	42 × 5	-	-
3392	Vṛsotsargavidhi	4,5,19+5	Inc.	42 × 4½	-	-
3404	Ekoddista Srāddhaprayoga	4,7-8,11, 12,14+4	Inc.	41 × 4	-	-
3416	Vṛsotaarga Prayoga	5	Inc.	39 × 4	-	-
3422	Sukadharma	9	Inc.	38 × 5	-	-
	(a)					
3422	Gitāmāhātmya	-	-	-	-	-
	(b)					
3423	Gita	1-26, 28-38	Inc.	37½ × 5	-	-
3476	Manasāpujāvidhi	7-20+7	Inc.	31½ × 3	-	-
3480	Ānhika Kṛtya	1,6,10-13	Inc.	29 × 3	-	-
3493	Caṇḍi	-	Inc.	25 × 3	-	-
3511	Vivāhapaddhati	-	Inc.	22 × 3	-	damaged
3582	Viravapujā	1	Inc.	28 4½	-	-
3583	Kāransodhaner Pātra Vandana	3	Inc.	28 × 4	-	-

ANNEXURE "C"

Description of palm-leaf Oriya manuscripts as mentioned in the Descriptive catalogue (Vol.IX) of the Asiatic Society.

Acc No.	Title	Size	No.of folios	Complete/ Incomplete	Copied in
4069	Citrakala	13"×1½"	60	Comp.	-
4070	Nala-Carita	9" × 1½"	71	Comp.	-
4071	Thirtythree Oriya Sonnets	10½" × 1"	20	-	-
4072A	Rāsālila	12½" × 1"	37	Comp.	-
4072B	Guṇasāgara	12 ½" × 1"	26	Inc.	-
4074	Cautisā				
4084A	Vidyādhara Pālā Virabhadra Pālā	13" × 1"	98	Comp.	
	Hataboli etc.	15" × 1½"	88	Comp.	-
4084B	Manohara Kāsiarapāla	15"×1"	48	Comp.	-
4268	Kishore Candṛānanda Compu Kavyāni	10½" × 1"	26	Comp.	-
5624A	Kartikamāhātyma	13½" × 1¼"	107	Comp.	-
5624B	Māghamāhtyma	13½" × 1½"	22	Inc.	-
5626	Srimad Bhāgavata	18¼" × 1½"	2-71	Inc.	-
5627	Māghamātyma	13¼" × 10"	170	Comp.	-

REFERENCES

1. Evidence available in the Cambridge Mss. of the *Pañcākāra* (1198 A.D.) *Yogarātnamālā* (1199 A.D.) and in the Tarpandighi copper-plate inscription, the Dacca image of Lakṣman Sen inscription (1122) and the Bodhgaya inscription of Asokacalla (1170 A.D.).
2. Different Pāla Kings ruled Bengal or a part of the state during C.750 to 1150 A.D. The Pāla period is called the Golden age of Bengal.
3. This is the largest number of dated and illustrated Mss. available of a single style of painting as mentioned by Sarasi Kumar Saraswati in his book *Pāla Yuger Citrakalā*.

4. Evidence of C 4th or 5th century A.D.-' the earliest palm-leaf documents which have come down to us'- Katre S.M.: *Introduction to Indian Textual Criticism* P.132.
5. Buhler places the Mss in the first half of the 6th century A.D. but Ahmed Dani considers that the Mss should be placed in the 8th century A.D.
6. The oldest manuscript in the Asiatic Society collection, Calcutta; an incomplete tantric text; size of the Ms. 12" x2". Folios 1-239 of which 49,59,72-84, 86-104, 106-132, 134,187, 189,190,192-229 are missing, lines on a page 7. dilapidated; language Sanskrit.
7. Preserved at present in the Asiatic Society, Calcutta, the Asutosh Museum of Indian Art, Calcutta University and in different libraries of Europe. They all present the Pāla style of painting. Painting was then used as illustrations of Mss. The 25 dated and illustrated Mss of this period contain about 400 miniature paintings. Besides these Mss at least 18 dated and illustrated Nepalese Mss and 14 undated but illustrated Mss are also available. Such Mss were prepared in the Buddhist monasteries of Bihar (i.e. Nālandā), Bengal (i.e. Vikramsīlā and Apanaka) and in Nepal in the later period. Indian Mss in bulk were shifted to Nepal at the destruction of the Buddhist monasteries of eastern India. Mr. Brian Houghton Hodgson collected a fair number of such Mss.
8. According to Hui Li, the biographer of Huen Tsang, the three Buddhist pitakas prepared during the First Buddhist council at Rājagṛha were recorded on palm-leaf. Rājsekhar, the rhetorician of the tenth century A.D. advised the poets to keep palm-leaf ready at hand to write down poems instantly during inspired moments.
9. The Turks at first sight took Nālandā, the famous Buddhist monastery as a fort and destroyed it completely. All the Buddhist monasteries of Bengal and Bihar which were the educational centres for higher studies were plundered by the Turks.
10. It was considered a sacred duty of a wealthy person visiting a monastery to render financial help for copying a text selected by the monks of the monastery. The scribes and the artists associated with the monastery were engaged in doing the work. Thus a good number of copies of an important text were prepared.
11. Preface, *Catalogue of Palm-leaf and selected paper manuscripts*, 1901; The Asiatic Society. Bengal.
12. This exquisitely illustrated Ms. collected from Nepal is preserved at present in the Asutosh Museum, University of Calcutta.
13. The Bengali name for paper, *Kāgaj*, has come from the Persian word *Kāgadh*.
14. This made a distinct difference between the traditional and the influenced (usually Persian) Jain miniature paintings of India.
15. From the sixteenth century.
16. The paper merchants were usually called *Kāgaji*.
17. Preserved in the University of Calcutta.

18. Ms.No.1231 collection of Bangiya Sahitya Parisad, Calcutta. The Ms.contains the text of the Srimadbhāgavata (10-12 skandhas); short description of the Ms. is available in Annexure-A.
19. Mr. Hodgson was the Asst. Resident and then the Resident (1833-43)
20. The 381 bundles of Mss. were distributed in the following manner.
 85 bundles to the Asiatic Society
 85 bundles to the Royal Asiatic Society
 30 bundles to India office Library
 7 to Bodleian Library
 174 bundles to the Société Asiatique & M.Burnouf.
 Information in this regard may be available in the 'Sanskrit Buddhist literature in Nepal' by Rajendralal Mitra.
21. The Brahmacaryāsram Vidyalayay founded in 1901 was renamed the Visva Bhārati in 1922 after it was upgraded to a university. Its objectives include research on 'Vedic and Sanskrit literature, Indian and Buddhist Philosophy, Medieval Indian religions and in Persian, Arabic and Islamic languages and culture. It is recovering lost works in Sanskrit from Tibetan and Chinese sources'.
22. Facsimile of the palm-leaf manuscript is available in the book *Caryāgītikoṣa* edited by Dr.Nilratan Sen and published by the Indian Institute of Advance Studies, Simla (in English), and by De book Store, Calcutta (in Bengali, 1978).
23. Will the state be ruled by a King? Yes there will be a King-1
 It is not safe to live in this village -2
 The man will perform the duties assigned to him -3
 The King will continue to rule over this kingdom -4
24. Will she become pregnant? She will become pregnant -1
 The disease is the result of his sin -2
 This disturbance is auspicious -3
 This disease comes from god -4
25. Assamese, Bengali, Gujarati, Gurumukhi, Kanarese, Marathi, Nagari, Newari, Oriya, Rajasthani, Sarada, Urdu, Arabic, Armenian, Burmese, Chinese, Javanese, Persian, Pusto, Siamese, Sinhalese, Tibetan, Turki etc.
26. Preface, *Catalogue of Palm-leaf and Selected Paper Manuscripts*, edited by Mm. Haraprasad Sastri, Asiatic Society, 1901.
27. Prof. A.H.Dani places the Horiuzi Mss in the 8th century A.D.
28. In the Sanskrit College Library a palm-leaf Tamil Ms. is available.
29. Total No of Mss of the Asiatic Society is more than 47,000 including about 29,000 Sanskrit and one thousand Bengali Mss. Total No. of Mss of the Calcutta University is more than 38,000 including 18,000 Sanskrit and 10,000 Bengali Mss.

Palm-Leaf Manuscripts in Oriya

K.K. Bisoi

Orissa is proud of its culture. Art, architecture, sculpture and literature had a time of flourish under the royal patronage. But the name and fame of this famous land has declined since 16th century A.D. The undaunted Oriyas who could fight with Asoka the Great and change him, bring back the Kalinga Jina to this land under Kharavel, fight with Mughals and Rajputs, Marathas bravely for hundreds of years were disarmed and ruthlessly annihilated by the victorious British Government from 1803 to 1857 A.D. This was possible because of internecine wars between the Chieftains ruling over the small principalities in Orissa.

The political decline of Orissa could not arrest the literary and cultural development of Oriyas. Orissa emerged as an important factor in the cultural geography of India. Oriya and Sanskrit literatures flourished unceasingly till 18th century A.D. under the royal patronage. The rulers of the time were encouraging the writers and artists by presentation and grant of jagirs. Hence, artists free from economic barriers had developed life in the field of study that rewarded them with name and fame.

Till the nineteenth century, palm-leaves were used in writing books with the help of iron pen or stylus. Even in the first half of nineteenth century, writing on palm-leaf was widely prevalent in Orissa.

The nineteenth century made a new epoch in the development of mass education. The scholars of the country and abroad made attempts to search and collect manuscripts which were the reservoirs of all disciplines of learning. The manuscripts are source materials for reconstruction of the history of a region. The puranic, imaginary literature deals with some historical facts, dramas based on historical themes reveal some history of the period. From the colophons, name of the king ruling, name of the village, pragana (sub-division) where the manuscript was completed, the date of completion, name of the patron and scribe are found which are very important in constructing the history. The costume, coiffures and the social elements of the period of the particular area are quite helpful in writing the socio-cultural history of the region. The pioneers in the field were Sir William Jones, the first President of the Asiatic Society of Bengal and the first English translator of *Gita Govinda* of the poet Jayadeva of

Orissa. Another European scholar who devoted much of time and energy to the searching for manuscripts was Colonel Mackenzie whose valuable collections are now preserved in the Government Oriental Manuscripts Library, Madras. John Beams, the patron of Oriya language in 19th c. A.D., is credited with a lot of work in the field of collection of manuscripts in Orissa. He was the first scholar who prepared a list of manuscripts discovered in Orissa and mentioned in 'Hunter's Orissa' Vol. II at Appendix-IX. Raja Rajendralal Mitra, an eminent antiquarian of 18th Century A.D. had a series of valuable publications one of which was 'Notices of Palm-leaf Manuscripts preserved in the Asiatic Society of Bengal' in which he had referred to the names of manuscripts collected from Orissa. It is M.M. Chakravartty, a versatile scholar of the last century who first of all published in J.A.S.B. 1998 (pp.332-386) a systematic history of Oriya language and literature on the basis of his study of Orissan manuscripts. Next in the line came M.M. Haraprasad Sastry who made a thorough search of manuscripts in the District of Puri. He had thrown a flood of new light on the importance of the new manuscripts in his compilation, *Descriptive Catalogue of Sanskrit Manuscripts in the town of Puri and adjoining Sasanas*.

Systematic steps were taken by scholars like Late K.C. Jayaswal and A.P. Banerjee Sastry after the establishment of the Bihar and Orissa Research Society. In 1936, after the creation of the separate state of Orissa, a good number of pundits were entrusted with the work of search of manuscripts found in different parts of Orissa including adjoining feudatory states. About fifteen thousand manuscripts were located. Records of such notices are preserved in the collection of the Jayadeva Orissa State Museum. During the first half of the 20th c. A.D. the collection of manuscripts was started by some Institutions of the State i.e. defunct Prachi Samiti, Baripada Museum, Bhawanipatna Museum, Bolangir Museum etc.

At present different Government and Semi-Government organisations are engaged in collection of manuscripts from different parts of the state and outside. The Jayadeva Orissa State Museum is the largest repository of the palm-leaf manuscripts. The total number of manuscripts is 36,000. The other Institutions engaged in collection of manuscripts are the Utkal University, Sambalpur University, Berhampur University, Banchhanidhi Pathagar, Udayapur in Nayagarh district, Sadashiva Kendriya Sanskrit Vidyapitha, and Jagannatha Sanskrit University, Puri and Kedarnatha Gaveshana Pratisthan, Bhubaneswar.

The palm-leaf manuscripts in Oriya language are preserved in different institutions outside the state of Orissa i.e. Asiatic Society,

Calcutta; Sampurnānanda Sanskrit University, Bharatiya Kalabhavan, B.H.U; Government Oriental Manuscripts Library, Madras; Saraswati Mahal Library, Tanjore, Adyar Library and Research Centre, Madras; Raja Vijayeraje Sindhia Library, Nagpur; National Museum, New Delhi; Oriya Dept. of Viswabharati University; Maharaj Sayaji Rao Library, Baroda; Bhandarkar Oriental Research Institute, Pune, L.D.Institute of Indology, Ahmedabad, Goudiya Mission Library, Brindavan, Indian Institute Library, Oxford; India House Library, Bodleian, London; Heidelberg University, West Germany.

The materials for preparation of manuscripts are determined by the luxuriant floral and faunal treasures of Orissa of which palm-leaf, bamboo-leaf and Kumbhi bark etc., are known. In the past, before the use of paper came into vogue, the writers and scribes were using the palm-leaves, bamboo leaves and Kumbhi bark. There are two types of palm-leaves used as writing support, *Sritala* and *Tala*. *Tala* (Brorassue Fiabillifer) which is also known as Palmyra or Thalivela grows all over India. But in Orissa, it is found abundantly. Its leaf is large, thick less flexible or non-absorbent. This variety is very suitable for incised writing. It is polished and strong. The palm-leaves were popularly used in writing manuscripts because of their delicacy and thinness. Writing on bamboo leaf was not popular. The writing on Kumbhi bark was prevalent only in hermitages and mathas (monasteries). In Orissan jungles, Kumbhi trees are found in good number. In the Jayadeva Orissa State Museum a manuscript containing *Gitagovinda* in seven ivory leaves is found preserved. It is tanned like a palmleaf and very important from calligraphical point of view. It is interesting to note that 17 to 18 lines are engraved in each side of the leaf. The substance of most of the manuscripts of Orissa is Palm-leaf. Engraving and painting on palm-leaves is one of the ancient art forms prevalent in the country. But in Orissa the art reached perfection and excellence. The process of preparation of palm-leaf for engraving or etching is a time consuming one. The leaves of the palm tree are cut into sized pieces and exposed to the sun. The semi-dried leaves are buried in muddy swamps. After four to five days the leaves are buried in muddy swamps. After four to five days the leaves are retrieved and washed. Then they are dried in air. To make the leaves free from insects, they are kept in the paddy leaps for some days. Now the leaves are ready for etching. Another process is that the leaves of the palm tree are cut into sized pieces. They are boiled in water. Then the rough portions are removed with the help of a knife. The stripes are smoothed and surface rubbed with oil and turmeric solutions. Then letters are etched with the help of metal stylus.

To make the writing visible, ink prepared by mixing oil with charcoal or black pigment of coconut shell is rubbed over the surface of leaf.

The seasoned leaves are stringed mostly in the hole cut in the middle of the leaf and as per requirement. Sometimes, more than one leaf is stitched together to give a broader writing surface.

There are two types of inscriptions on palm-leaf manuscripts. One is prepared by using carbon ink and another by etching with metal pen or stylus. But in Orissa we find only manuscripts inscribed in metal pen i.e. stylus. Its Oriya etymology is *Lekhani*. The stylus is of different shapes. But the height of a stylus does not cross 15cm. Some printed palm-leaf manuscripts in the collection of Jayadeva Orissa State Museum are found to be written in Oriya script and language during the first half of 20th century A.D.

The palm-leaf manuscripts are of different sizes. The length of the smallest manuscript preserved in the Orissa State Museum is 5 cm. where as the biggest one is 57 cm. The minimum width of an Orissan manuscript is 2 cm. whereas the maximum is 4.7 cm.

Orissan artists or scribes were very fond of different shapes of manuscripts i.e. Khadga, mataya (fish), Vinchana (fan), parrot, musika (rat) and mala (garland). The sizes are very fascinating and one cannot guess if something is written inside. But manuscripts are full of descriptions. The leaves are cut into sizes and engraved. But in case of manuscripts of garland shapes, the letters are engraved in particular shape or form and then cut into sizes. Each bead is made with gradually diminishing circular pieces of palm-leaves containing the verses of *Srimad Bhagavad Gita*. Another interesting garland is composed on *Gitagovinda*. The lines are in concentric circle. Both the manuscripts are preserved in the collection of Orissa State Museum.

The manuscripts of Orissa re-written in various languages like Oriya, Sanskrit, Telugu, Tamil, Nagari, Bengali and Persian are based on the respective scripts. But Oriya constitutes the major section. Oriya and Sanskrit were used by the pundits and educated people. But manuscripts in Hindi, Bengali, Telugu and Tamil languages seem to have been produced by the Oriya writers and scholars living in other parts of the country, and at the same time Pundits of other languages living in Orissa might have contributed to Oriya in their own languages.

Manuscripts in Bengali language in Oriya script and Oriya language in Bengali script are available both in Orissa and Bengal. It is interesting

to mention that manuscript in Oriya script linguistically depicting Hindi are found in Bihar. On account of this process of acculturation, the Oriya language probably gained, popularity even outside the state.

Oriya is a member of the Magadhi group of Indo-Germanic family of languages in India. It is spoken by people inhabiting the area spread along with the North-Eastern sea-coast of the country. Oriya language and literature was not given any scope during the period as Sanskrit based Brahminism held an almost totalitarian sway over the land. Devoted Sanskrit intellectuals produced an enormous numbers of Sanskrit works. Even kings aspired to the glory of authorship in Sanskrit. Thus the local language was neglected. But in course of time the Asokan edicts, the Kharavelas chronicle, the temple inscriptions and the prose commentary of the '*Shishuveda*' by an unknown Natha saint of the 7th century A.D. give a clear picture of a long tradition of prose writing in Orissa. Literary compositions in prose and poetry, clearly display that Oriya language had been slowly evolving itself for quite long.

The Oriya as we know to-day, appears to have clearly emerged only during the 13th to 15th century A.D. definitely the period of epics of Sarala Dasa, *Keshava Koili* by Markanda Dasa, the prose poem *Rudrasadhanidhi* by Avadhut Narayana Swami.

The Orissan manuscripts on Oriya language deal with Oriya Purāṇa, Oriya Kāvya, Oriya prose literature, Oriya Historical literature, Gunigaredi, Vyākaraṇa, Ayurvēda, Saṅgīta, Jyōtisha and, Silpa Sāstra, Govinda etc.

It is clear from an analytical study of the collections of the different institutions that almost all the purāṇas and two great epics like the '*Rāmāyaṇa*' and the '*Mahābhārata*' were translated and adopted into Oriya by the eminent poets of this land. Sarala Dasa, the Adhikavi of Orissa and a great devotee of goddess Sarala, by voluminous and lucid writings, raised the status of Oriya literature. His *Mahābhārata* based on the theme of the *Mahābhārata* by Maharishi Vyasadeva. He was successful in making some new additions to his work which were his own. His *Mahābhārata* was not only popular in Orissa, but also in Bengal and Andhra regions. He is also credited with producing other monumental works i.e. *Chandi Purāṇa*, *Saptakaṇḍa Rāmāyaṇa*, *Vilamka Rāmāyaṇa*, *Bharata Harivamsa* etc.

Other Oriya authors popular for writing the *Mahābhārata* were Gopinatha Das, Visvamvara Dasa, Mudhusudana, Purusottama Mahapatra, Krushna Chandra, Kanhu, Hrushikesha, Vasudeva, Raja Krushna Singh, Jagannath Pani, Kapilesvar Vidyabhusan etc.

The noted authors of Oriya *Rāmāyana* were Balarama Dasa, Maheswar Dasa, Krushna Chandra Rajendra, Krushna Charan Patnaik, Keshava Tripathi, Gopinath Dasa, Haladhara Dasa, Gopal Telenga, Damodar Dasa and others.

The greatest contribution in the field of *Purāṇic* literature was made by Jagannatha Dasa who completed the translation of eleventh skanda of *Bhāgavata* before the advent of Sri Chaitanya at Puri in 1509 A.D. *Bhāgavata* by Jagannatha Dasa had been aptly described as the Bible of the Oriyas as there is no village in Orissa without a *Bhāgavata Tungi*. Even the tenth skanda of Bengali *Bhāgavata* was an imitation of Oriya *Bhāgavata* of Jagannatha Dasa. It appears from the writings of poet Sanatana Vidyavagisa of 17th century A.D. that this work had no Bengali translation for which he had to follow the *Bhāgavata* by Jagannatha Dasa and incorporate six chapters (91-96) of the tenth skanda as he failed to make a Bengali rendering of the same. In the words of Sanatana Vidyavagisa:

ପୁନ ପୁନ ଶ୍ରୋତାଗନ କରି ନିବେଦନ
ପ୍ରଥମ ହସ୍ତେ ଗ୍ରନ୍ଥ ଲିଖିଲୁ ଆପନ ।
ଦରାମୀର ଶେଷ ଶ୍କନ୍ଦ ଧାଷା ନା ପାଇନ
ଅନେକତ ପରିଗ୍ରାମେ ଖେତାଇନ ।

ଏ ହେତୁ ଉତ୍କଳ ଧାଷା କରଲି ଲିଖନ
ଜଗନ୍ନାଥ ଦ୍ଵାରା କୃତ ଅପୂର୍ବ ବର୍ଣ୍ଣନ,
ଗ୍ରନ୍ଥ ସମାପନ ହେତୁ ଉତ୍କଳ ଗ୍ରନ୍ଥ
ବଂଶଜ ଧାଷାୟ ଉତ୍କଳ ମିରାଈଆ ।
ଦରାମ ଶ୍କନ୍ଦ ଧାଗବତ ସଂପର୍କ ହସ୍ତେ
ଷଡ଼ାଧ୍ୟାୟ ଲିଖିଲି ମୁଁ କପାତେ ।
ସ୍ତ୍ରୀ ସାଧୁଗନ ମୋର ଦୋଷ ନା ଲେଖେ
ଧାଗବତ ସାଧୁବାକ୍ୟ ଆନନ୍ଦେ ମୁଁ ନିବେ,

BHASHABANDHA BHĀGAVATA

Jayadeva Orissa State Museum Ms Cat. No. B.10

Oriya literature flourished with the advent of Panchasakhas or five comrades in Oriya literature. They were Balarama, Jagannatha, Achyutananda, Yasovanta and Ananta Dasa. Besides Balarama and Jagannatha, Achyutananda was famous for his *Bhāgavata Lahari Harivama*. 285 works of Panchasakhas are preserved in the collection of Jayadeva Orissa State Museum most of which are unpublished. Other puranakaras famous for *Harivamsa* were Nilambara Dasa, Narayana Dasa, Viptra Gopala and others. Mahadeva Das is known for his translations of *Padma Purāṇa*, *Vishṇu Keshari Purāṇa*, *Karttika Mahatmya* etc.

The translations of Puranas popular to Orissa were *Nrusimha Purāṇa* by Pitamvara Dasa, *Karttika Mahatmya* by Mahadeva Dasa, *Brahma Vaivartta Purāṇa* and *Harililamruta* by Chakradhara Dasa.

The manuscripts on Music are important as they cover all the branches of the music like gita, tala, raga, nrutya, vadya etc. *Samgīta Nārāyaṇa*, an authoritative work on music compiled by Gajapati Narayana Deva; *Abhinaya Darpana Prakāsha* by Jadunatha Simha; *Gītaprakāsha* by Krushna Dasa Badajena Mahapatra; *Nāṭyamanōrama* by Raghunatha Ratha, *Sangitarṇava Chandrika* and *Sangīta Kalpalata* by Haladhar Mishra have enriched the collection of the Jayadeva Orissa State Museum.

The art of drawing and painting on palm-leaves tremendously flourished in Orissa. The craftsmanship of Orissan artists was full of descriptions of Oriya classical works. Different indigenous colours obtained from Hingula, Haritala, Gorachana, Harida, Kumkuma, Kajjala and Geru were used in painting the manuscripts. Themes of painting are based on stories of the *Rāmāyaṇa*, *Mahābhārata*, *Bhāgavata*, other kāvyas and purāṇic works. The total number of illustrated manuscripts preserved in the state is 400. The other repositories of the state are enriched with about 200 illustrated works in black and white and multicolours. The illustrations on the works of *Vaidehisa Vilasa*, *Lavanyavati*, *Ushabhilasha*, *Chitrakavya Bandhodaya*, and other works like *Kundali Janana* and *Krushnalila* are so lively that one cannot imagine the artistic workmanship without a glance at the works themselves.

Some important manuscripts of Jyotisha are preserved in different manuscript collections in Orissa. The noted authors in the field are Nimbadeva, Srinivas Mishra, Tripurari Karana, etc.

Silpa Sāstras are treatises of Hindu architecture and sculptures prescribing the procedures to be adopted in the construction of temples for gods and goddesses and houses for human beings. We find architectural terms mentioned in the literature covering a wide range from the vedas down to the kāvyas and nāṭakas. The important *Silpasāstra* manuscripts in Oriya are by Bauri Maharana, Visvakarma, Krushna Maharana and *Kirtti Sudhanidhi* by Gopinatha and *Silpi Pothi* by Nilakantha Maharana.

Orissa like its art and literature has a rich heritage of mathematical treatises. Proficiency in Mathematics is exemplified in the manuscripts. The authors of Orissan Mathematical manuscripts are Anirdha, Artta Dasa, Krushna Padhiari, Uchhavananda, Kunjabana Pattnayaka Krupasindhu, Ganagadhara, Nimai Charana, Radha Charana, Brajabhusana, Vamadeva,

Shiva Mohanty, Sarangadhara, Hari Nayaka and Srinatha of the Ganita Sāstras. *Lelāvati Sūtra* is very popular in Orissa. The manuscript is available in all parts of the state. It provides scope for all age groups to study mathematics through works of addition, subtraction, multiplication, division, mensuration, trigonometry and algebra etc.

Āyurvēda manuscripts deal with identification of different diseases, preparation of mixtures and tablets from indigenous leaves, roots, flowers, barks, fruits, etc. and remedies for different diseases of human beings and animals. Prescriptions of diet for cure of particular diseases are also mentioned in Ayurvedic manuscripts. They also deal with different mantras and their applications for cure of diseases. Madhovakara, renowned for his *Nidana* is claimed to be an Oriya. A large number of manuscripts on *Nidana* and its commentaries both in Oriya prose and verses are available in all parts of the state. Authors like Visvanatha Sena, Raghunatha Dasa, Bhima Dasa, Krushna Dasa, Gopinatha Patra, Dinabandhu Harichandana, Vanamali Kara, Nilamavara Samantaraya, Murari Dasa, Vipra Jagannatha and Bhubaneswar Pattayoshi have contributed different Ayurvedic works in Oriya language which are still in manuscripts.

Manuscripts on *Gunigaredi* which contain mantras in Sanskrit mixed with Oriya and archaic Oriya are available in Orissa. In villages, village physicians use *Gunigaredi* manuscripts for curing diseases. These manuscripts are important for a study of old Oriya literature.

Madalapanji or the temple chronicle of Lord Jagannatha ranks foremost among the historical literatures. The system of writing *Madalapanji* probably began from the time of Gajapati Kapilendra Deva of 15th century A.D. who declared Oriya as the state language and issued grants in Oriya. Other historical works like *Kalahandi Madala*, *Chayani Chakada*, *Gana Sammata*, *Singhabhumi Prabha*, *Mayurbhanja Vamsanu Charita*, *Patia Rajavamsavali*, *Nagavamsa Charita*, *Kadamba Gatha*, *Kalibharata*, *Jagannatha Charitamruta*, *Chaitanya Bhagavata*, *Visvamvara Vihara* in manuscript forms are preserved in the collection of the State Museum.

The original Oriya literature may be divided mainly into ten classes namely (1) Bhagana and Janana, (2) Samhita, Gita and Malika (3) Chautisa, (4) Chaupadi, (5) Chanda, (6) Chitau, (7) Poi, Boli, Padia and Champu, (8) Pala, (9) Suanga, Lila and Rasa, (10) Vratkatha and Samara Sahitya and hundreds of manuscripts dealing with the above mentioned works are found in Orissa State Museum manuscript libraries.

A good number of literary and *Purāṇic* works in Sanskrit were translated into Oriya. Some are not exact versions but adaptations.

Gitagōvinda by the Oriya poet Jayadeva was so popular that different *kāvya*s not less than forty poems were composed in Sanskrit on its model. Besides exact Oriya versions of *Gitagōvinda* were contributed by Dharanidhar, Bajari Das, Vanibhusan Ananta Rath, Vasudeva Mishra and Jagannatha Mishra.

The most important Oriya writers who contributed to Oriya literature and are worth remembering are Arjuna Dasa for *Kalpalata*, Narasimha Sena for *Ramabibha*, Dinakrushna Dasa for *Rasakollola*, Shyamasundara Deva for *Anuraga Kalpalata*, Dhananjaya Bhanja for *Anangarekha* and *Ichhavi*, Ramachandra Patnaik for *Anuragavati*, Rathi Dasa for *Alamkaraboli*, Rama Dasa for *Dardhyatabhakti*, *Rasamruta*, Padmanabha Srichandana for *Ichhavi Kāvya*, Baligaon Dasa for *Agata Bhavisya*, Sishu Samkara Dasa for *Ushabhilasa*, Purusottama Dasa for *Kanchi Kaveri*, Vishnu Das for *Premalochana*, *Savitri Charita*, *Mandakini Chautisha*, etc.

Among the illustrious Oriya poets, Upendra Bhanja is given an esteemed place. He is the author of about eighty *kāvya*s, chautisas etc. of which eighteen works are very important from the point of view of composition, word placing and style. His creations are distinguished from all of his predecessors and successors too. His tremendous knowledge of both Oriya and Sanskrit grammars and his extra-ordinary talent in creating *kāvya*s, chautisas have made him the *kavisamrata* (emperor of poets) of Orissa. Of his *kāvya*s only eight have been edited till to-day and rest are in the form palm-leaf manuscripts.

Kavi Samrata Upendra Bhanja is the first Oriya poet to compose in the style of alliterations. As for example; in his *Vaidehisa Vilasa*, every line of the *kāvya* begins with 'Va' and in *Subhadra Parinaya* every line with 'Sa'. In *Kala Kantuka* each line begins and ends with 'Ka'. His work *Abanarasa Taranga* is a work devoid of any *matra*. In some of his *kāvya*s, the 34 alphabets beginning from 'Ka' to 'Ksha' are serially used. In the beginning of each line of his work *Chandabhusana* divided into 34 chapters the same style is followed in each *chhanda* (chapter). The meaning of the words used in his *kāvya*s changes when letters are omitted. As for example, a word gives a different meaning if the second letter is taken out. It was possible only due to his mastery over both the Sanskrit and Oriya grammars. Some successors tried to follow the style but were not successful.

The manuscripts preserved in different repositories are a few in comparison with the manuscripts lying with different monasteries and

persons. Except Jayadeva Orissa State Museum, no other Institution publishes manuscripts. Only one hundred manuscripts in Oriya and Sanskrit have yet been published by the Directorate of Culture, Orissa. About eighty percent of the manuscripts are unpublished and progress of editing and publication is not encouraging due to paucity of funds.

Since, palm-leaf manuscripts are most important records for indological study, utmost care should be taken to preserve those manuscripts from deterioration.

In Orissa, different traditional methods were adopted for preservation of Palm-leaf manuscripts. In ancient times, Aswagandha was used with the manuscript covered in clothes to repel insect attacks. For preservation of manuscripts, underground cells were prepared. The popular conventional method of preservation of manuscripts is exposing them to the Sun. Our ancestors were keeping the manuscripts in houses and exposing them to the Sun in the lunar month of Bhadraba or August. The rays of the Sun in that particular month are very favourable. The worms are killed under the Sun, fungus cleaned and the manuscripts bound tightly for one year. In the houses, manuscripts are kept on the sangha (projection) in the kitchen. The heat of the furnace touches the palm-leaves. The other traditional method of treatment is the use of bean juice from time to time. It is useful and not very expensive. It also makes the letters visible. This method is widely followed in Orissa. Use of red cotton cloth in covering the manuscripts is another method to rescue the manuscripts from worms. Application of neem leaves is yet another traditional method of preservation. The neem leaves are to be dried in air and then made powder by grinding. The powder is applied to the palm-leaves. The manuscripts which are used frequently like books are never attacked by worms. Dust never accumulates in them. One indigenous method of protecting the manuscripts is to bind the manuscripts tightly and not to allow them to be spoiled by oil and water. As we find in a manuscript-

जलादक्ष तैलादक्ष रक्षामां स्थबन्धनात्

आखुभ्यौ परहस्तेभ्यो इति बदति पुस्तकम्

In consideration of his labour and pain taken in copying out the manuscript, the scribe has requested the readers to take care of the manuscript as they would take care of a son.

भग्नपृष्ठ कटिग्रीव तुल्यदृष्टि रघोमुखः

दुःखेन लिखितो ग्रन्थः पुत्रवत् परिपालयतम्

In State Museum, the traditional method of exposing the manuscripts to the Sun rays and flattening and dusting is followed. The chemical

treatment of manuscripts is not adopted due to dearth of chemicals and non-function of the airconditioned plant.

Although, lakhs of palm-leaf manuscripts are preserved in different institutions and by individuals, no centre except Jayadeva Orissa State Museum is available for preservation and conservation of manuscripts. The chemical laboratory of the Jayadeva Orissa State Museum is meant for undertaking preservation work of the palm-leaf manuscripts. But in practice, the work is not satisfactory.

The History Department of the Sambalpur University has published one workwise catalogue. It does not appear to be systematic but is prepared by some untrained personnel. The Utkal University has published one catalogue of manuscripts but it is not descriptive. The Oriya Department of Visvabharati have published two descriptive catalogues. The attempts of Jayadeva Orissa State Museum are to some extent encouraging. They have published five workwise catalogues, one author's catalogue, one monograph of illustrated manuscripts and ten volumes of Descriptive Catalogues on Dharmasastra Sanskrit literature, Sanskrit purana, Tantra, Jyotisha and Oriya manuscripts.

The catalogues prepared by private organisations are not systematic. They have simply done accessioning work. Since, they are not experts in the field, their cataloguing method is defective. No attempt has been made by the Government to verify the manuscripts and tally those with their accession list. Even a good number of private organisations are availing themselves of grants from the Government of India for preservation of manuscripts but no expert opinion is taken before any grant is released. It is doubtful if they are maintaining catalogues or accession lists.

In view of my long experience in the field I do venture to put forth some suggestions for retrieval of palm-leaf manuscripts. The method of acquisition of palm-leaf manuscript by the Government needs to be modified. "Payment on the spot" by experts is to be done. Secondly, in every state a conservation laboratory with mobile vans should be established to undertake the preservation and conservation work of the manuscripts preserved in both Government or private organisations. Thirdly, the Government of India should seek expert opinions before release of grants to private organisations and persons for conservation of palm-leaf manuscripts. Lastly, Oriental Research Institutes with central autonomous status should be established in each state. The system of attaching Manuscript Departments to Museums should be abolished.

Manuscripts in Ragunath Temple, Jammu

Champa Sharma

Introduction

Dogri, the language of the Dogras, belongs to the Indo-Aryan group of languages and as a literary language it is one of the 22 modern Indian languages recognised by Sahitya Akademi, New Delhi. It is the prominent language of Jammu Province of J&K State and is as old as the other modern Indian languages. Its revival started around mid forties and by now it has acquired a standardised and defined style in accent, spelling and idiom. Dogri derives its name from Durgar-the ancient title of the region and occupies an important place in the linguistic map of North India. The language is being taught at the School, College and University level. It enjoyed royal patronage during the Dogra rulers till the end of 19th century. It has its own script known as Namen Dogre (a form to Takri) but Dogras have adopted Persian and Dēvanāgarī scripts for writing in Dogri.

In its old form Dogri Script was imperfect and was not easy to read. For this reason Maharaja Ranbir Singh caused to be invented a modification of it by bringing it nearer to Dēvanāgarī so that the system is quite one with that though the forms are somewhat different.¹

The New Dogra characters became so common in the 2nd half of the 19th century that it was used in all the official and Army affairs and was similarly used on stamps, papers, currency notes, postal stamps, etc.

Raghunath Temple Mss library

Raghunath Temple Library is one of the 215 institutes of India where about 5 lakhs of Mss of Sanskrit, Prakrit and Pali are said lying preserved.² This library owes its existence to the keen interest in Indian learning of the Dogra ruler — Late Maharaja Ranbir Singh (1857-1885 AD). It is located in the vicinity of Raghunath Mandir, which is a group of temples, the most conspicuous object to the visitors of the plains, on the picturesque slopes of Jammu town-the winter capital of J&K State.

This library, comprising more than six thousand manuscripts, is a very important collection and contains many valuable copies of works

known only through names or citations. S.S.Charak has given the number as six thousand and one hundred. The manuscripts are on different subjects and in various languages. This fact gets authenticated by Dr.Karan Singh's observation that "the manuscripts in this library contain works not only in Sanskrit but also in Hindi, Urdu, Persian, Arabic, Ladakhi, Dogri, Telugu and Sharda script, thus well-reflecting the unique diversity of our cultural heritage".³ Personal royal attention was paid for three decades for the enrichment of Raghunath Temple library. In the first place the need for setting up an ideal library was primarily to cater the needs of the teachers and pupils in various schools and the collection of Mss, therefore, began simultaneously with the establishment of the Pathshala in the 1st year of Maharaja Ranbir Singh's reign. Various steps were taken in this regard.

Scholars were invited from various parts of India and they were entrusted with the job of collecting, copying and accepting as gifts important Mss on various subjects. The liberal patronage exercised by Maharaja attracted a number of Pandits of Jammu. Thus new opportunities arose for enlarging the collection by local purchases, Pt. Asanand was deputed to Benaras to purchase Mss worth Rs.15,000/-⁴. An outside distinguished scholar, namely Pandit Vyas, well-versed in the medical lore, had been drawn from Patiala to the court of Jammu along with his books. His very extensive personal collection, rich in medical and Kāvya texts, was purchased from his widow for this library, when Pt. Vyas breathed his last in 1869 A.D. Liberal rewards were offered by the Maharaja to the contributors of Mss to the Raghunath Temple Library.⁵ Maharaja Ranbir Singh personally supervised the composite process of search, selection and collection of useful Mss. The Mss which were not available for sale were copied and the copies got authenticated and corrected thoroughly. Teams of copyists copying Mss of various scripts and galaxies of linguists were found translating from Sanskrit, Persian, Arabic, Bodhi and other languages into Hindi, Urdu, Persian and Dogri.

According to M.A.Stein a considerable addition accrued to the library in connection with a visit which Maharaja Swai Mangal Singh of Alwar had paid to the Jammu Court in 1883 A.D. This prince, knowing the fond interest taken by his host in the acquisition of Manuscripts, took occasion to present him subsequently with copies of rare works contained in the Alwar Palace library. These copies were deposited in the Raghunath Temple collection which thus shares with the Alwar library the possession of a number of interesting "Anecdota".

Raghunath Temple library comprises, besides some original compositions produced under the patronage of Maharaja Ranbir Singh, a considerable number of new commentaries and digests in various branches of Sanskrit literature which were compiled at different periods by Pandits specially appointed for this purpose. Apart from "translations into Hindi of the standard works selected from the whole range of the Darshanas, the Dharma and other Shastras, Persian and Arabic works on various subjects have been preserved in the Raghunath Temple Library. Mention may be made of "*Vīratnāśekharsīkhā* (No. 1989-93) which is an extensive work on Polity and is translated from the Akhlaq-I-Mohsini and furnished with a full commentary by Pandit Sāhibrāma, the *Vīravaidya-ratnahāra* (No.3572) medical text translated by the same Pandit from the Arabic and also annotated. There is a number of anonymous digests in various śāstras such as Kalpasāgar, (No. 3418) in Medicine, the Muhūrtakhaṇḍa No.3195, and Tajikasamhitā, No.3073, in Astronomy, which seem to have been prepared in collaboration by several of Maharaja's Pandits".⁶

M.A.Stein, in the introduction of the Catalogue, states that "the additions, which the library received after the compilation of this list, were not amalgamated with the older stock, but were allowed to remain unclassified and in separate bundles, marked with the names of the collector or of the place from which the manuscripts had been received. This circumstance made it easy for Stein to identify those manuscripts which belong to the latest collections embodied in the library namely (a) the collection of copies from manuscripts of the Alwar Palace Library, presented by the Maharaja of Alwar, containing Mss now marked Nos. 4043-4138: (b) a miscellaneous collection of transcripts of Kashmirian texts, Nos. 33.6 3532, made under the superintendence of Pandit Sukharāma of Srinagar during the last years of the late Maharaja and lastly (c) a collection of manuscripts, now numbered 647-743, which was received from the Maharaja's agents in Benaras."⁷

The manuscripts acquired for the library were first deposited in a room adjoining the central cellar of the temple, dedicated to Raghunathji. But the number of manuscripts went on increasing and thus making the accommodation insufficient. As such the manuscripts were later on kept in a gallery forming part of the quadrangle which encloses the temple Court. But this gallery too did not provide safety from fire and other dangers to this valuable literary asset. Thus it was shifted to an appropriate place where each and every collection was properly arranged and labelled.

The whole body of the manuscripts has been divided into the following sections:-

A. Vedic literature

1. Vedic literature 202
2. Sūtra literature 221
3. Upanishads 421
4. Vedānga 26

B. Scientific and Technical literature, Kāvya

5. Grammar 276
6. Lexicography 70
7. Poetics 27
8. Science of Music 35
9. Science of Alamkāra 106
10. Kāvya 263
11. Dramatics 54
12. Tradition and fiction etc, 31
13. Dharmashāstras 718
14. Purvamimāṃsā 158
15. Vedānta 404
16. Sāṅkhya Philosophy 15
17. Yoga Philosophy 26
18. Nayāya Vaisheshika Philosophy 435
19. Jyotish, arts etc. 510
20. Medicine 241

C. Epic, Puranic and Devotional literature

21. Epics 79
22. Purāṇas and Mahatmyas etc. 309
23. Bhakti Shāstra 313
24. Tantra Shāstra 1031

25. Jain literature 35
26. Works in Tamil Script 68
27. Works in Śāradā script on Bhurja Patra 29

Amongst the numerous manuscripts, the unique is the birch-bark manuscripts of the Kashmirian Atharva-veda which can claim of great interest in the total treasure of Indian Mss. This manuscript of 287 leaves, written in Śāradā characters on both sides of about 20 × 25 cms. in size, was discovered by Maharaja Ranbir Singh. In the words of Sukhev Singh Charak- "The great German Orientalist Prof Rudolf Von Roth was led in 1856 by a remark of a traveller Baron Von Hugel to the belief that a new version of the Atharva-Veda might be found in Kashmir. Hugel had remarked that "the Brahmins of Kashmir belonged to the Atterwan, or as they said Attermāna Veda" and taking a hint from this statement, Prof. Rudolf induced the authorities of the British Government of India to institute a search in the inaccessible paradise in the hope of finding a new version of the Atharva-Veda." His conjecture came true.¹⁰

In 1875 the unique manuscript was discovered by Maharaja Ranbir Singh and was sent by him to Sir William Muir, the then Governor of the North-West Province and he despatched it to Prof. Rudolf who wrote and got published a stirring account of the discovery in his famous tract "Der Atharva Veds in Kashmir." (Tubingen 1875)

After the death of Prof. Rudolf Van Roth in 1895 the Manuscript passed into the possession of the University library of Tubingen. Later on a photographic fascimile of the entire manuscript was published by Prof. Maurie Bloomfield of the John Hopkins University, Baltimore. According to Prof. Bloomfield, "the ancient glory of India radiated new light from the leaves of this unique manuscript."

Besides this, rare manuscripts contained in the class of samihitās and Brāhman, form a very representative collection of texts belonging to Sruti portion of several vedas and it is worth mentioning that a large portion of the Mss are of old date.¹²

The oldest Mss in the whole collection are on vedic rituals entitled āṅkhya-grihya-sūtra Sangraha by Vasudev and dated S. 1426 (AD 1369). Stein observes: "There is a considerable collection of manuscripts which contain either the original Kalpas of individual schools and the exegetical texts connected with them, independent treatises or manuals on particular ceremonies."¹³

Among the texts relating to Sāmveda one finds copy No.69 of (i) prapāthakas and (ii) of Chhāndogya Brāhmaṇa, pritikāras commentary called Sāmadarpaṇa No.159 and 161 on the two of the principal song-books of the Sāmveda—the Udgāṇa and Uhyagan.

Under the head of the white yajurveda the library possesses several old manuscripts of Uvalā's commentary, the Mantra-bhāṣya, on the Vājasaneyi saṁhitā. Three of these Mss Nos. 101-103 show in the colophones at the end of several chapters the verse concluding with the words: *मोक्षे पूर्वो प्रशस्ति-* which was first noticed by Bhandarkar and which enabled him to fix accurately the time of the commentator.

Vedic rituals: Under this section one finds a considerable collection of Mss which contain either the original Kalpas of individual schools or independent treatises and manuals on particular ceremonies. According to Stein, Nārāyaṇā's or Aṣṭasākashara's padhati to the Sāṅkhāyana Śrauta Sūtra, an equally rare work is also represented in the Jammu Library (No. 362). The manuscript was written in Vikrama Samwat 1691.

Upanishads: Regarding this section it may be noted that Raghunath Temple Library contains Nārāyaṇā's commentary called the Dīpikā to not less than 49 upanishads. The Dīpikā of the Rāmopniṣad Nos. 758-59 gives the name of the commentator's father Ratanākārbhaṭṭa which was earlier unknown to the scholars.

IV Vedāṅgas:

Grammar: There are 279 manuscripts of grammatical works. Among the Mss connected with Panini's system two Mss of the Kāshikāvṛtti, coming from Kashmir, have been stated by Stein as of great interest.

Among works belonging to grammatical systems other than Panini's there may be noted hitherto an unknown commentary called Ākhyātachandrikā, No. 815 by Surisimha on the Ākhyāt section of the Sārasvataparakriyā.

Lexicography: Among the 70 Mss of the class a mention must be made of a rare synonymic glossary of Apya Dikshita called Nāmasangrahamālā No.1073. One finds a large number of old Kośas quoted in it.

According to S.S.Charak there are a number of manuscripts on prosody and poetics. The one notable of prākṛat metres is ascribed to Pinga and is usually called prākṛitic Pingla. Among the Rhetoric and Kāvya the best known kāvya prakāśh of Āchāraya mammat the Nripavilāsa of shivram gives a lucid description of the court life and manners.

Mss on fables and novels also find a place in this library. Stein says there is a Shārdā text of Bāna Bhatta's Kādambri with its continuation, the Uttarbānga by the author's son,¹⁴ there is a fragmentation of Kshemendra's Brihat-Kathā.

The Persian Mss are said to have been shifted to the Mss library of the Government Research Department, Srinagar which was also set up by Maharaja Ranbir Singh. Many useful Mss are preserved in the Research library at Srinagar called the "Ranbir Collection."

A big collection of about 700 Mss, some of them in printed form preserved in Sri Ranbir Singh Public Library, Jammu, has been removed to Research library in Srinagar.

As far as the Mss in Dogra script are concerned, their number is not large. These include official documents, inter-state correspondence between the Dogra Rajas of Jammu-Chamba, Kangra belt of the 18th century and translations of Sanskrit, Persian, Urdu, Punjabi works in Dogri scripts, books in Dogri, namely Līlāvati,¹⁵ Dogri translation of the well known, Sanskrit text on mathematical science. Vyavhār Gitā, spreading over 630 pages and divided into 18 chapters on the analogy of the Bhagwat-Gita; Ranbir Chikiata Sudhāsār and Sanskrit works (in Dogri Script) namely Amar-Kosh (second part), Dhananjya vijaya, Bālmiki Rāmāyana and Persian book known as Kareema, Kanoon-I-Zabita-I-Diwani with Persian and Dogri scripts placed in parallel columns on each page), Army law (on the same pattern), Persian Dogri book civil and criminal law entitled Ranbir Dandvidhi etc. were printed and their Mss are also lying preserved in this library.

To sum up, it may be said that Dharmasāstra section of the Raghunath Temple Library contains the largest number of Mss amounting to 718 which is followed by Jyotish-Art section with 510 Mss.

The Raghunath Temple Sanskrit Sangrahayla has been stated by historians as one of the largest sanskrit manuscript collections in the world. A good number of rare manuscripts are preserved in this library and the Sanskrit scholars of the world have found the only existing manuscript of the Paipalād Atharvaveda in the collection.¹⁶ 68 Mss in Tamil scripts and 29 in Shārdā script (Bhurjpattra) also attract the attention of the scholars towards them.

Besides Raghunath temple library, some valuable Mss collections in Sanskrit, Persian, Urdu, Punjabi, Dogri etc. and some illustrated Mss, containing the miniatures are preserved in the other libraries of Jammu

namely Ranbir Public library Jammu, Library of J&K Academy of Art, Culture and Languages, Post Graduate Department Library of Jammu University and also in the personal possession of the scholars of this place which need immediate attention of researchers.

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Palm-Leaf Manuscripts in Punjabi

B.B. Chaubey

I. Nature of literature composed in Punjab

Punjab has been the cradle of Aryan culture from time immemorial. A large number of literary works were composed and preserved here with utmost care. *Veda*, the earliest literary monument of the human race, was composed here. Panini, the greatest grammarian of the world, compiled his *Astādhyāyī*, a monumental grammar of Sanskrit language, here in the land of Punjab. The western part of Sindhu, cultivated by the rivers *Ṛṣṭāmā*, *sasartu*, *Rasā*, *Śvetī*, *Kubhā*, *Gomatī* and *Varnu*, was known as *Gandhāra*. The eastern part of Sindhu, where *Sarasvatī*, *Vipāt*, *Śutudrī*, *Paruśnī*, *Asikni* and *Susomā* flowed, was called *Pañcanada* in the time of *Mahābhārata*.¹ This was also known as *Vāhlika* or *Vāhika*.² Previously *Gandhāra* and *Pancanada* together formed one unit. But later on, due to certain political reasons, they became separated. In the time of *Mahābhārata*, *Vāhika* or *Pancanada* was divided into three states, viz, *Sindhu*, *Sauvira* and *Madra*. *Jayadratha* was the king of *Sindhu*. The region comprising *Bahawalpur*, *Multan* and *Rawalpindi*, was called *Sauvira* and the region comprising *Lahore* and *Amritsar* was *Madra*. In 712 A.D. the regions of *Sindhu* and *Sauvira* were captured by the Muslim invaders.³ *Madra* was also captured by them in 1008 A.D. Upto the Mughal period *Sindhu*, *Sauvira* and *Madra* were constituent parts of *Pancanada*. *Akbar* gave the name *Punjab* to *Pancanada* on the basis of Farsi translation of the word by *Khusro*. During the British period the entire *Punjab* was one unit. After partition in August 1947 a major portion of *Punjab* went to *Pakistan* leaving only 13 Districts - *Gurdaspur*, *Amritsar*, *Ferozepur*, *Jalandhar*, *Ludhiana*, *Ambala*, *Karnal*, *Gurgaon*, *Hissar*, *Rohtak*, *Kangra*, *Hoshiarpur* and *Shimla* - with it. In 1966, *Punjab* suffered a further bifurcation into *Punjab* and *Haryana*, giving away certain portions to the *Himachal Pradesh*. Thus, at present, *Punjab* consists of 11 districts, viz., *Gurdaspur*, *Amritsar*, *Ferozepur*, *Bhatinda*, *Jalandhar*, *Ludhiana*, *Hoshiarpur*, *Kapurthala*, *Patiala*, *Sangrur* and *Roper*. *Punjabi* is the state language of the present day *Punjab*. However, for the purpose of the study of manuscripts in *Punjabi* we cannot and should not confine ourselves to the works of the present-day *Punjab*. We have to expand our range to the *Greater Punjab* which produced a lot of literature in *Punjabi*.

The entire literature in the ancient Punjab was in Sanskrit because it was the only literary language of the period. Different types of Prakrits were the spoken languages of the people. When Prakrits began to be used as literary language, Apabhramsha replaced them as the common language of the people. As stated above, Punjab had to suffer a chain of invasions by the Muslims from the very beginning of the 8th century A.D. which caused a great setback to the literary activity of the Hindus in Punjab. A collection of Mss pertaining to different branches of Indian sciences preserved in the University of Takshashila and other places in Punjab was set on fire and damaged. A large number of Buddhist works were also destroyed. Not a single Ms of the period is preserved to us today.

After conquering Punjab, Muslims began to settle here in a large number. Since they were rulers it was but natural that the language spoken in Punjab by the Hindus should have come under the influence of Farsi, the language of the Muslims. It is held by most of the scholars that the Apabhramsha under the influence of Farsi took a new form called Hindav or Hindi. With the eastward spread of Islam the Apabhramsha of that part was influenced by Farsi and it gave rise to different dialects of Hindi. It may be mentioned that the Hindi of that time was not like modern Hindi. It was the initial stage of Hindi. At this stage we find the literature of the Nāthas and Siddhas. On the religious canvass of Punjab, after Vedic period, we find Bauddhas, Śaivas, Śāktas, Siddhas and Kāpālikas propagating their tenets in Punjab. The Nāthas and Siddhas were greatly influenced by the Vajrayāna, a branch of Buddhism which had spread throughout the western part of India at that time. They were also influenced by the Śāktas. It may be said that Nātha sect in Punjab was a result of cohesion of Bauddha, Saiva, Śākta and other Vāmamārgi sects. Like these sects Nāthas were against the Brahmanic system of society. In Punjab at least three sub-sects viz., Nāṭeśvarī Pantha, Pāgala Pantha and Ganganāthī Pantha of the Nāthas, were well-known. The home of Lakshmana, the founder of Nāṭeśvarī Pantha was situated on the bank of Jhelam and was known as Gorakha-tīlā. Nāṭeśvarī Pantha was again sub-divided into Nāṭeśvarī Pantha and Dariyā Pantha. The home of Chaurangīnātha, the founder of Pāgala Pantha was situated in Abohar, the eastern Punjab. The home of Bhisam, the founder of Gangānāthī Pantha was situated in Gurdaspur. Among the Nāthas nine were very popular. Though Gorakh Nath belonged to the eastern part of the country, he spent a considerable period of his life in Punjab. He had composed about 40 books which were compiled in Gorakha-vani. Jalandharnath had composed three works, viz., *Vimukta-manjarigītā*, *Hunkāracitta-bindu-bhāvanākrama* and *suddhivajrapradīpa*. Chauranginath had composed *Prāṇasaṅkalī*,

Ratana-nath had composed *Avalisaluka* and *Kafirabodha*. Many more works are said to have been composed by the Nāthas.

In Punjab a special type of work in praise of kings called *Viragāthā* was composed by the Cāraṇa poets known as Bhātas with a view to eulogising the bravery and heroism of their kings, so that they could be inspired to fight with the Muslim invaders. A single composition of this nature, viz., *Prthivīrāja rāso* of Chandavaradai written in Punjab is known to us. There may have been many more works of the Cāraṇa poets, but these are not available to us.

Seeing gradual defeats of the Hindu kings in the hands of Muslim invaders and having no hope for their protection against the terrors of the Muslims, the common people had become nervous. Now there was no other way but to seek the shelter of God for their protection. It may be mentioned that when Punjab was under the constant terror of Muslims, some of the Muslim saints were very sympathetic to the Hindus. They tried to patch-up the differences between the Hindus and Muslims. These Muslim saints were called Suffis. Baba Fariduddin Shakar-ganja (1173 A.D.) born in Mustang was a pioneer to Suffi-thought. By the efforts of the Suffi saints the Suffi-thought spread over Punjab. There were four prominent sects of the Suffis, viz., Chisti, Suharavardi, Kadariya, and Nakshanandi. The Chisti sect was founded by Baba Fariduddin Shakarganja himself. Many Suffi-deras were established in Multan, Pākapattana, Karnal and Ambala. A large number of literary works were written by the Suffi saints.

In the 14th century A.D. when the whole of Punjab and a major portion of the remaining part of the country were under the tyrannous rule of the Muslim Sultans, a religious resurgence called Bhakti-movement took place under the leadership of two Vaiṣṇava saints in the north, Rāmānanda in Varanasi and Ballabhacārya in Vrindaban. The former preached the bhakti of Sītā and Rāma and the latter that of Rādhā and Krishna. Rāmānanda tried to reaffirm the faith of the Hindus in their religion. He established many *Akhāras* and *Chāvanīs* for the propagation of his tenets. He had many disciples⁴ among whom Anantānanda, Kabirā, Rabidās, Peepa and Sen were most prominent. He did not believe in caste-system. Anyone could be his disciple. There were many others who were very much influenced by the Vaiṣṇava Bhakti movement. Nāmadeva, Trilochana, Angada, Shriranga, Naraharidas etc. were also powerful instruments in the propagation of Bhakti Movement. These Vaiṣṇava Bhaktas in their mission travelled from one place to another. They composed a large number of verses in the then spoken language of the people, and used to sing them.

It may be mentioned that most of the compositions of these saints were not written down by themselves but at a later stage by their devotees.

Punjab could not remain aloof from the Vaisṇava Bhakti movement. Guru Nanak Dev became a pioneer of this movement in Punjab. It may be pointed out that the religious background of Punjab was a little bit different from that of the northern India. Here Nāthas and Suffis had already prepared an atmosphere of the devotion of one God without a name and form, based on *jñāna* (knowledge) and *prema* (love). With this background Guru Nanak Dev gave a new mould to Vaisṇava Bhakti movement. He was an outstanding religious leader not only of Punjab but of the whole country. He travelled throughout the country and preached his tenets to the people through his Bānīs (saintly compositions). He instituted a new Guru-shishya tradition and the term *śiṣya* called Sikh in local dialect, became conventional to his followers. The position of Guru became just like a king. In this system there was a unique combination of Guruship and kingship. The Gurus used to nominate their successors, not essentially their sons but any of their *śiṣyas* whom they thought spiritually enlightened and equipped with the qualities of providing religious leadership to the society. Guru Nanak Dev was the first Guru. After him Guru Angad Dev, Guru Amardas, Guru Ramdas, Guru Arjan Dev, Guru Hargobind, Guru Har Rai, Guru Harkrishna, Guru Teg Bahadur and Guru Gobind Singh became Gurus in their gradual succession in this very order. These Gurus, for the protection of Hindus, suffered a lot in the cruel hands of Muslim rulers. These brave spiritual soldiers never bowed to the tyranny of the Muslim rulers. It is to be pointed out that the Gurus were not only spiritual soldiers but also literature and musicians of high calibre and lovers of literature. They themselves composed a number of poems and inspired others to write. They had patronised a good number of poets, scholars and pundits. Guru Gobind Singh sent many of his *Śiṣyas* to Varanasi for the study of Veda and Śāstras. These scholars prepared copies and translations of the ancient Sanskrit texts. The court of Guru Gobind Singh was an assembly of scholars and poets.

By the time of Guru Gobind Singh, the Vaisṇava Bhakti movement in the north was in full swing. Guru Gobind Singh was very much influenced by this movement. He composed thousands of poems in praise of 24 Avataras (incarnations of Viṣṇu); Rāmā Krishna and Durgā. He was the pioneer of Rāmā and Krishna kāvyas in Punjab. Before him no kāvya on Rāmā or Krishna was composed in Punjab. On his inspiration a flood of Rāmā and Krishna-kāvyas inundated the soil of Punjab. The Krishna kāvyas in Punjab are found in the form of *gāthās*, *baraha-māhas*, *Kabillas*,

savayyas and many *Rāga-rāginis*. It may be mentioned that the poets who composed *Rāmā* and *Krishṇa-kāvya*s belonged to the court of Guru Gobind Singh. We find references to 52 such court-poets who were well-versed in ornamental poetry.

After Guru Gobind Singh, the tenth Guru, the Guruship tradition came to an end. Guru Gobind Singh gave a verdict to his followers to accept *Ādigrantha* as their Guru and thenceforth the *Ādigrantha* began to be called *Guru-granth-Saheb*. Under the arrangement there was no further scope for the poets and scholars to remain attached with that seat. Fortunately for literature, many Sikh rulers who were themselves lovers of art and literature extended that patronage to poets and scholars. We may make special reference to the rulers of Patiala, Nabha and Kapurthala states who did commendable services to the cause of literature.

II. Centres of Ms Collections

Barring a few religious writings of the Gurus preserved, no work of literature composed in Punjab in medieval period was brought to the notice of the people till 1950 when a band of scholars like Sardar Shamsheer Singh 'Ashok', Pyara Singh Padma, Satyapal Gupta and a few others brought to light Punjabi Mss written in Punjab. Dr. Harbhajan Singh made an intensive research on the Hindi literature written in Gurumukhi script. Pt. Chandrakant Bali, Dr. Gobind Nath Rajguru also did commendable work in this field. Though no systematic effort was made by any institution or Government for the search of Mss, in a casual course of search by the individuals it was found out that heaps of Mss wrapped in clothes were lying uncared for at different places. The Gurus and kings, under whose patronage original Mss were prepared, were very careful and cautious about the preservation of the Mss. At that time printing machines were not invented. So when a copy became old or brittle another copy was prepared by some scribe, who was paid a handsome amount for the work. If a man wanted to have a copy of the first work he could get it re-written by a scribe, or himself. But after the discontinuation of Guruship and kingship, the preservation of Mss became a problem. Some Gurudvaras tried to preserve them but could not make proper arrangements. The Mss prepared under the patronage of the kings of Punjab remained in the custody of their successors, but due to lack of interest of the successors they were not preserved properly. These Mss were not even catalogued. The condition of the Mss lying in the *Deras* and *Mathas* was still worse. Many Mss were prepared and preserved in the families of Pundits. But due to ignorance and lack of interest of their descendents the Mss suffered a great loss.

Most of the brittle Mss were either thrown into rivers or sold to the kavadis. At the time of the unfortunate partition of the country, Punjab suffered a great loss. Besides many other things, the Mss were also destroyed in riots.

Thanks to God, however, Punjab has still preserved a large number of Mss at different places. We may mention here some of the institutions or centres where Mss are said to have been deposited.

1. Sikh History Research Department, Khalsa College, Amritsar.

The management of the Khalsa College, Amritsar had established the Sikh History Research Department in 1930 with a view to collecting historical material and conducting research on the modern history of Punjab beginning from 1469 with the birth of Guru Nanak Dev. Fired with the missionary zeal to collect data pertaining to the history of modern Punjab in general and that of the Sikhs in particular, scholars engaged in this task made strenuous efforts for the purpose. Due to their prolonged search and patient labour they were able to collect a large number of Mss, written original documents, photographed or transcribed, pertaining to Sikh History, literature and culture. Since Persian was the court language of Punjab before the advent of British rule, many Mss were prepared in Persian script. Many Persian Mss of historical importance were also collected by the Department. It may be pointed out that in course of the search of Mss a single Sanskrit Ms viz., *Nānakacandrodaya*, a Sanskrit translation of Bhai Bala's *Janam Sākhi of Guru Nanak* was also collected by the Department.

2. Language Department, Patiala.

After independence, Patiala (founded by Ala Singh) became the capital of Pepsu State. The Pepsu state had established a Punjabi Department with a view to developing Punjabi language. For the first time the Department prepared two works, viz., *Punjabi Patrakalā*, and *A list of Punjabi Publication* in 1953. In 1952 the Department had a collection of about 150 Punjabi Mss. But gradually, with the efforts of scholars working there, the number increased to a considerable extent. In 1956, as a result of the integration of Pepsu in Punjab, the Punjabi Language Department was converted into the Language Department of Punjab with its head quarters at Patiala as before. The Language Department opened its branches in almost all districts of Punjab. Now the Department has a large collection of Punjabi Mss, written in Gurumukhi script. It spends a huge amount for procuring Punjabi Mss.

3. Punjab Archives, Patiala (Central Library, Patiala).

Punjab Archives had a collection of some Mss. After some time when it was converted into Central Public Library, Patiala, the number of Punjabi Mss in Gurumukhi script increased in the collection. About 1600 Mss are said to have been deposited in the Central Public Library, Patiala. They have their accession numbers.

4. The Motimahal Palace Library, Patiala.

The Motimahal Palace Library, Patiala has a collection of about more than 300 Punjabi Mss in Gurumukhi script. These Mss have been accessioned but not open to the public.

5. Khalsa College Library, Patiala.

The Khalsa College Library, Patiala has a collection of about 20 Mss in Punjabi. These Mss have their accession numbers.

6. Mahendra College Library, Patiala.

This library has a collection of about 10 Mss in Gurumukhi script. These have been accessioned.

7. Gurudvara Motibag, Patiala.

Some Punjabi Mss are also reported to have been under the possession of this Gurudvara.

8. Shiromani Gurudvara Prabandhak Committee, Amritsar.

The Shiromani Gurudvara Prabandhak Committee, Amritsar runs three libraries at Amritsar under its control. These are (i) Sikh Reference Library, (ii) Central Sikh Museum, and (iii) Guru Ramdas Library. These libraries have a good collection of Mss in the Gurumukhi script.

9. Khalsa College Library, Amritsar.

This library has also a collection of about 10 Mss in Punjabi.

10. Motilal Nehru Municipal Library, Amritsar.

This Library has a few collections of Mss in Punjabi.

11. Central Sikh Museum, Amritsar.

A few Mss are said to have been deposited in this Museum.

12. Punjab Sahitya Academy, Model Town, Ludhiana.

This academy has also some collections of Punjabi Mss.

13. Panjab University, Chandigarh.

The Punjab University, Chandigarh has a collection of about 100 Mss in Panjabi. These have been accessioned.

14. Vishveshvaranand Vishva Bandhu Institute of Sanskrit and Indological Studies (Panjab University), Hoshiarpur.

The institute has a collection of about 50 Mss in Gurumukhi script.

15. Kahan Singh Pustakalaya, Brajesh Bhavan, Nabha.

This library has a collection of about 40 Mss in Punjabi.

16. Sikh Kanya Mahavidyalaya, Ferozepur.

This college also has a few number of Punjabi Mss in its collection.

17. Collection of Punjabi Mss in private possession.

A large number of Punjabi Mss are reported to have been in the private collections of individuals among whom mention may be made of the following scholars:

- i) Dr. Ganda Singh of Patiala
- ii) Prof. Pritam Singh of Patiala
- iii) Sardar Shamsheer Singh 'Ashok' of Guara Teh Malerkotla (Distt. Sangrur)
- iv) Prof. Kartar Singh Suri, Chandigarh
- v) Baba Hari Singh, Advocate, Jalianwala Bag, Amritsar
- vi) Bhai Maha Singh, Amritsar
- vii) Dr. Surinder Singh Kohli
- viii) Sardar Seva Singh Gyani, Tarantaran

- ix) Shri Gobind Singh Lamba, Patiala
- x) S.Bhagvant Singh, Sangrur
- xi) Shri Devender Singh Vidyarthi
- xii) S.Avatar Singh, Jalandhar
- xiii) Dr. Sher Singh, Ludhiana

It may be mentioned that the Private Ms collections of Dr. Ganda Singh, Prof. Pritam Singh and Shri Shamsher Singh Ashok are very large.

18. Punjabi Mss outside Punjab

Punjabi Mss are also reported to have been in the Mss collections outside Punjab. As per our information the Nagari Pracharini Sabha, Varanasi and Khudabakhsh Library, Bankepur (Patna, Bihar) have a few Punjabi Mss in their possession.

19. Other Places

In Punjab there are certain Deras of Udasina, Nirmal, Nāmadharī, Nirankhārī and Vaiṣṇava saints where Mss belonging to their sects are said to have existed. Dera Sangatwala, Bazar Maisevan, Dera Baba Sham Singh, Amritsar also have some Punjabi Mss in their possession.

III. Catalogues of Punjabi Mss

Most of the Punjabi Mss said to have been deposited in different libraries, institutions and private collections have been catalogued by various agencies in Punjab. An account of such catalogues is given below:

1. Catalogue of Mss deposited in Sikh History Research Dept. Khalsa College, Amritsar.

The catalogue of Persian and Sanskrit Mss deposited in the Sikh History Research Department was prepared by Sardar Kripal Singh, who was in-charge of the Department and the same was published in 1962. This catalogue gives full information about 248 Persian and a single Sanskrit Mss. Many Mss of that collection have been published by the same Department.

2. Catalogue of Punjabi Mss in two volumes (Punjabi Hatthalikhitān dī Sūcī) prepared by Language Department, Patiala.

The Language Department, Patiala has published a catalogue of, Punjabi Mss in two volumes with the name 'Punjābī Hath-likhitān dī Sūcī', compiled by Sardar Shamsher Singh 'Ashok' in 1961 and 1963. It may be mentioned that the Mss entered in this catalogue do not belong to the collection of the Language Department alone. It is rather a catalogue of Punjabi Mss deposited in different libraries, institutions and private collections at different places. Following is the institution-wise number of the Mss entered in the catalogue Vol. I and II:

Library/Institution/Private collection	Vol-I	Vol-II	Total
1. Language Department, Patiala	271	129	400
2. Punjab Archives, Patiala	16	37	53
3. Central Public Library, Patiala	457	29	486
4. Motimahal Palace Library, Patiala	280	15	295
5. Khalsa College Library, Patiala	-	17	17
6. Mahendra College Library, Patiala	-	7	7
7. Gurudvara Motibag, Patiala	3	-	3
8. Sikh Reference Library, Amritsar	-	33	33
9. Shri Guru Ramdas Library, Amritsar	-	4	4
10. Khalsa College Library, Amritsar	-	10	10
11. Motilal Nehru Municipal Library, Amritsar	-	2	2
12. Central Sikh Museum, Amritsar	-	3	3
13. Punjab Sahitya Academy, Ludhiana	8	6	14
14. Panjab University, Chandigarh	-	70	70
15. Vishveshvaranand Vedic Research Institute, Hoshiarpur	-	3	3
16. Kahan Singh Pustakalaya, Nabha	40	-	40
17. Sikh Kanya Mahavidyalaya, Ferozepur	-	4	4
18. Private Collections:-			
i) Dr. Ganda Singh of Patiala	26	29	55

Library/Institution/Private collection		Vol-I	Vol-II	Total
ii)	Prof. Pritam Singh of Patiala	3	101	104
iii)	Sardar Shamsher Singh 'Ashok'	66	39	105
iv)	Prof. Kartar Singh Suri, Chandigarh	-	3	3
v)	Baba Hari Singh, Advocate, Amritsar	-	6	6
vi)	Bhai Maha Singh, Amritsar	-	5	5
vii)	Dr. Surinder Singh Kohli	-	7	7
viii)	Sardar Seva Singh Gyani, Tarantaran	-	3	3
ix)	Shri Gobind Singh Lamba, Patiala	1	3	4
x)	Sardar Bhagvant Singh, Sangrur	1	1	2
xi)	Sardar Avtar Singh, Jalandhar	-	1	1
xii)	Shri Devender Singh Vidyarthi	-	1	1
xiii)	Dr. Sher Singh, Ludhiana	-	1	1
19 Punjabi Mss outside Punjab				
i)	Nagari Pracharini Sabha, Varanasi	-	2	2
ii)	Khudabaksha Library, Bankipur (Patna, Bihar)	-	1	1
20. Dera Baba Sham Singh, Amritsar				
		-	1	1

From this list, it is obvious that it is not complete. Not all Mss of most of the above said institutions have been entered in this catalogue. For example, out of the 12 Mss of the Vishveshvaranand Library only 3 Mss have been entered. This is also evident from the statement of Sardar Shamsher Singh Ashok, the editor of the catalogue that only the Mss of Language Department, Punjab Archives and Central Public Library could be entered in all. All Mss of the Punjab Sahitya Academy, Ludhiana and others could not be entered in the catalogue. However, most of the Punjabi Mss which were available at different libraries, institutions and private collections upto that date have been entered in this catalogue.

The Mss entered in this catalogue have been classified into 27 subject groups in the first volume and 20 groups in the second volume. Subject-wise number of the Punjabi Mss is as follows:

Vol.I	Subject	Punjabi Mss	Combined
1.	Śruti, Smṛti and Sadācāra	13	9
2.	Purāṇa, Bhūta, Kathā etc.	47	6
3.	Rāma-Sāhitya	51	6
4.	Krishna-Sāhitya	90	36
5.	Mahābhārata and its Parvans	26	19
6.	Bhāratiya Darśana	104	66
7.	Nātha Sāhitya	10	6
8.	Islami literature	7	9
9.	Santavānī	20	36
10.	Sikh Sāhitya	180	121
11.	Bhugol (Geography)	5	-
12.	Itihāsa (History)	40	5
13.	Kavitā (poetry) - Kisse, Bārahmāha, etc.	226	32
14.	Rīti grantha (Pingal, Alankāra, etc.)	102	14
15.	Nāṭaka (Drama)	22	2
16.	Saṅgīta (Music)	11	11
17.	Kośa and Nighaṇṭu	18	1
18.	Vyākaraṇa (grammar)	1	-
19.	Nīti Śāstra	45	8
20.	Jyotish (Astrology)	22	7
21.	Vaidyaka and Yunāni	49	2
22.	Kāma-Śāstra (Erotics)	7	-
23.	Śālihotra (Paśucikitsā)	22	-
24.	Bāla Sāhitya (Children literature)	3	-
25.	Photography	1	-
26.	Śikāra, Khela, Tamāse etc. (hunting, games, show, etc.)	5	-
27.	Kheti bārī (farming and horticulture)	1	2
Total		1189	98

Vol.II	Subject	Punjabi Mss
1.	Dārśanik-Sāhitya (Philosophy)	58
2.	Purāṇa and Mahābhārata	50
3.	Rāma-Sāhitya	36
4.	Krishna-Sāhitya	26
5.	Islami Sāhitya	12
6.	Santa-Vāṇī	35
7.	Sikh-Sāhitya	182
8.	Itihāsa (History)	7
9.	Śabdakośa and Nighaṇṭu	13
10.	Kavitā (Poetry)	87
11.	Rīti-grantha	44
12.	Nīti-Śāstra	16
13.	Stri-Śikshā (Women Education)	1
14.	Śaṅgita Śāstra (Music)	3
15.	Vaidyaka and Yuṇāṇī	13
16.	Kāmasāstra (Erotics)	3
17.	Śalihotra (Paśu-Cikitsā)	3
18.	Śastra-Kalā (Armoury)	1
19.	Jyotisha (Astrology)	7
20.	Mantra Śāstra	1
Total		598

The above figures of the Mss show that the first volume contains a list of 1287 Mss and the second volume contains a list of 598 Mss. It may be mentioned that sometimes in one title number of several titles of the Mss have been shown but these have not been enumerated separately. If these titles were taken separately the number of Mss would have increased.

3. Catalogue of Mss under the possession of Shiromani Gurudvara Prabandhak Committee, Amritsar (Sādā Hattha likhit Punjabi Sahit)

The Shiromani Gurudvara Prabandhaka Committee, Amritsar had a collection of Punjabi Mss at three centres, viz. Sikh Reference Library, Kendriya Sikh Ajayabghar, and Guru Ramdas Library, all at Amritsar. In 1964 it was suggested by the Sikh Itihāsa Research Board that under the joint patronage of the Gurudvara Prabandhak Committee and Darbar Saheb a catalogue of all collections be prepared. The suggestion was accepted and Sardar Shamsheer Singh 'Ashok' was deputed for this work. He prepared the catalogue of 773 Mss which were in 383 codices and the same was published in 1968 under the title 'Sādā Hatthalikhit Punjabi Sahit' (our hand-written Punjabi literature). The Mss have been classified on the model of 'Punjābi hatthalikhitān dī Sūci' published by the Language Department, Patiala, in the following categories (1) Śruti, Smṛti, (2) Purāṇa (3) Mahābhārata and its parvans, (4) Rāma-Sāhitya, (5) Krishna-Sāhitya, (6) Bhāratiya Darśana (Vedānta, Yoga, Nyāya, etc. (7) Santa Sāhitya, (8) Gurubāni, (9) Guru Itihāsa, (10) Sikh Sāhitya and Itihāsa, (11) Udāsina Sāhitya, (12) Nirmal Sāhitya, (13) Nirankāri Sāhitya, (14) Kavītā (Kisse, Kahāni, etc.) Rīti-grantha (15) Alankāra, (16) Chanda-Śāstra, (17) Nāṭaka, (18) Nīti-Śāstra, (19) Śabdakōśa, (20) Saṅgīta, (21) Bhugola, (22) Vyākaraṇa, (23) Cikitsā, and (23) Mantra-Sāhitya.

At the end of the catalogue some information about 176 authors of those Mss has been given with a view to making them known to the scholars. The catalogue also gives information about the name and the place of the libraries where the Mss are said to have been deposited. Among the authors of these Mss about 50% belong to Punjabi, one-third to Braja-bhāṣā, and the remaining 10 to Urdu, Hindi, Farsi, Rajasthani etc. This catalogue may be regarded as a supplement to the 'Catalogue of Punjab Mss, published by the Language Department, Patiala, Punjab.

4. The Catalogue of Vishveshvaranand Vishva Bandhu Institute of Sanskrit and Indological Studies (Panjab University) Hoshiarpur (VVBIS&IS)

The Vishveshvaranand Vishva Bandhu Institute of Sanskrit and Indological Studies came into existence on July 1, 1965 as a result of the taking over of the Vishveshvaranand Vedic Research Institute (VVRI) Hoshiarpur by the Punjab University, Chandigarh. In its Mss collection, besides Mss in other languages, the Institute has a collection of some Punjabi Mss in the Gurumukhi script. The VVRI had published its

catalogue of Mss in two parts in 1959. At that time 12 Mss in the Gurumukhi script were in the Ms collections of the Institute. Those Mss had been entered in the catalogue under Nos. 6178-6186. After the publication of the catalogue some 16 Punjabi Mss were added to our Ms collection. These 16 Mss, too, have been entered in the catalogue of VVBIS & IS (P.U.) Hoshiarpur, published in 1975, under the editorship of Dr. B.R.Sharma, the then Director of the Institute.

It would not be out of place to mention here that the catalogue published by VVRI, Hoshiarpur (1959) gives the total number of Mss as 8360 written in different scripts on various subjects:

<i>North Indian</i>		<i>South Indian</i>	
Dēvanāgarī	6462	Grantha	919
Śāradā	197	Telugu	404
Utkala	17	Malayalam	290
Bengali	7	Nandi Nagari	46
		Tamil	15
		Kannada	2
		Vartul	1

It is pertinent to point out that the South-Indian Mss are written on palm-leaves in different scripts of their areas.

The catalogue of the Mss published from the Vishveshvaranand Vishva Bandhu Institute of Sanskrit and Ideological Studies (P.U.) Hoshiarpur (1975) gives the total number of Mss as 1736 under four groups viz., Vedic (319) Dharmaśāstra (232), Vyākaraṇa (806) and Sanskrit Granthas (379). These Mss are in different scripts. A script-wise list is as follows:

Dēvanāgarī	1477	Assamese	6
Śāradā	157	Malayalam	7
Grantha	46	Urdu	2
Gurumukhi	16	Persian	14
Maithili	11		

After the publication of the second catalogue more than 500 Mss have been added to our Ms collection. These are written on paper in Dēvanāgarī script. Among these Mss, one is a photo copy of a rare Ms entitled 'Sanca' dealing with Tantra and Jyotish in the Pabuci script. Another important Ms is the *Rāmacaritamānas* in Gurumukhi script. These Mss were recovered from Himachal Pradesh. The cataloguing of these Mss is under process.

IV. Language and Script of the Mss

The entire literature in ancient Punjab was composed in Sanskrit because it was the only literary language of the period. After Sanskrit, Prakrit and Apabhramsa with many regional varieties became the spoken languages of the people. With the arrival of Muslims a new language called Farsi came into being. In the beginning it was the language of the Muslims, but gradually this language had a great influence on the local language of the people. However, there was a marked distinction between the two languages. The Hindus of Punjab spoke a language which had developed from Sanskrit through Prakrit and Apabhramsa. This language was known as Hindavi or Pashchimi Hindi. Modern Punjabi has been developed from that Pashchimi Hindi. The Hindus used to write in Dēvanāgarī which was a little bit different in modes of writing from that of the modern period. The Muslims spoke the Farsi language and used to write in Persian script. During the Muslim rule Urdu in the Persian script was the court language. All the literary compositions of Suffi saints were in Persian script. Scholars like Gobind Singh Lamba⁵ hold that the literature composed by the Suffi Saints is the first literature of Punjabi. The Punjabi literature, according to him, was nurtured by Musalman poets. Thus, according to him, before the introduction of the Gurumukhi script, Punjabi literature was composed by the Musalman poets in the Persian script. It may be pointed out that before the introduction of Gurumukhi other scripts like Śaradā, Pābucī, Tānkri and Dēvanāgarī were most commonly used for the Mss. Śaradā script was popular in Kashmir. The Pābucī was popular in Himachal Pradesh. The Tānkri script was used by persons of business community, for writing their *Bahis* (business records). The Gurumukhi script was first invented by Guru Angad Dev, the second Guru for the use of writings of the sacred *vānīs* of the Gurus and saints. It was a mixture of Śaradā, Pābucī, Tānkri and Dēvanāgarī scripts. The first literary composition in Gurumukhi script was authored by Guru Arjun Dev, the fifth Guru, in 1604 A.D. This was a great landmark in the history of literary composition when a new script was used for the purpose. With the introduction of the Gurumukhi script all literary compositions began to be written down in

this new script. All ancient Sanskrit texts, too, began to be transliterated into the Gurumukhi script. With the sense of reverence to the Gurus the Gurumukhi script became the religio-literary script of Punjab. Not only Sanskrit texts but the Farsi compositions in Persian script of the Musلمان poets too, were transliterated into the Gurumukhi script. Thus a vast literature pertaining to Sanskrit, Hindi and Urdu was transliterated and also originally composed in the Gurumukhi script. This is evident from the Mss found in different collections in Punjab. The subject classification of the Mss also clearly bears out this fact. Recently we have received a Ms of the *Rāmacaritamānas* by Gosvāmi Tulsidāsa in Gurumukhi script from Una (now in H.P.⁶)

The oldest Ms in Gurumukhi script is the *Ādigrantha* compiled by Guru Arjun Dev in 1604 A.D. None of the Mss available till date are older than the *Ādigrantha*. The entire *Rāmakavyas* and *Krishnakāvyas* are the compositions of the poets who flourished in the court of Guru Gobind Singh. The material used for writing is invariably country-made paper. In Kashmir, Mss were written on birch bark, for it was the only available material for writing purposes. Being far way from the sea coast palm-leaves were never used for writing purposes in Punjab. Not a single Ms on palm leaf is said to have been found in Punjab or the north-western zone. In our Ms collections we have about 500 palm-leaf Mss but these do not belong to Punjabi language or Gurumukhi script. These have been collected from the South.

V. Textual problems concerning publication of the Punjabi Mss.

The history of the publication of Punjabi literature in Gurumukhi script is not very old. It goes back to about 150 years. In 1953 a list of Punjabi publications was published by the Punjabi Language Department, Patiala. Very few Mss have been published so far. A majority of Mss still await their publication. Preparing a critical edition of an old work is not an easy job. The first problem which an editor encounters is the accurate knowledge of old Gurumukhi script. The Gurumukhi script has three sub-varieties, viz., Damdami, Kashmiri and Shikhsatta. The Shikhsatta is that type of Gurumukhi which Guru Gobind Singh used for his writings. Kashmiri is very much nearer to the *Śāradā* script. The Damdami Gurumukhi is very common. A person cannot edit a Punjabi Ms unless he knows very well the three varieties of Gurumukhi script.

Secondly, a major portion of early Punjabi literature was composed in Persian script by the Muslim writers. The old writings of Warish Shah,

Hasham, Kadaryar, Ahmedyar are in Persian script. With the introduction of Gurumukhi script many writings of Muslim writers were transliterated into Gurumukhi. While transliterating, many changes, knowingly or unknowingly, crept in the new transliterated copy and the same continued to be followed in other transcripts. Dr. Gobind Singh Lamba has cited a few examples where the change has been made knowingly by the Gurumukhi transcriber whose transcript has been utilized for preparing the critical edition of the Text. *Kissa Kāmarūpa* is a work of Ahmedyar, a Muslim poet. So it was natural that he should use words like *Gosaliajam*, *Mursat*, *Allah* etc., of the Islamic tradition. But while transliterating the text in Gurumukhi script these words were changed by the transliterator into their Hindu equivalent words: *Gosaliajam* has been changed into *Radhakrishna*, *Allah* into *Thakur* and *Mursad* into *Satguru*⁷. Similarly, while transliterating the *Hasam di sassi* the word *hik* has been changed into *ik*. So, while preparing a critical edition of such texts the original copy in Persian script should also be compared.

Thirdly, there are certain writings which were originally composed in Gurumukhi script but these have been edited and printed in Dēvanāgarī script. This tendency has given rise to a controversy whether these belong to the Hindi language or the Punjabi language. As a matter of fact, this controversy should not arise as these two were not different by nature at that time. If there was some difference between the two, it was a regional one. So while preparing a critical edition of a text of that period due consideration must be given to the language of the period notwithstanding the differences of the script. The nature of the language of the text must be preserved. It should not be changed in any case under the influence of modern Hindi or Punjabi.

To sum up, Punjab has a good collection of Mss in Punjabi at different places—public libraries, private libraries, private collection, Deras and Ashramas. Though a large number of Mss at different places have been catalogued by different agencies there still exist many Mss, in private collections which need cataloguing. For example, there is a large number of Mss in Punjabi University Library, Patiala. Moreover, there is still scope, for getting new Mss from many unknown places. A systematic survey of such Mss should be undertaken by the government or any of the Universities of Punjab. The Mss which have been catalogued should be placed at one centre so that they may be available to scholars for study and research.

REFERENCES

1. Mbh. Karnaparva, 38.30
2. *Ibid*, 44.7
3. Dr. Ishwari Prasad, '*History of India*', p.240
4. Twelve disciples of Rāmānanda were known as Dvādaśa Āditya, 12 Suns.
5. Dr. Gobind Singh Lamba, *Punjabi Hatha Likhat Sahit*, Patiala, 1981, p.12.
6. Preserved in the Manuscript section of VVBIS & IS (P.U.) Hoshiarpur; country made paper, Granthamāna 14428; collection No.1693.
7. (a) Rāje seja kītī Khushihālī mursad purī pāi (Farsi)
Rāje seja kītī khusihali Satguru purī pai (Guru)
- (b) Sambal kamali nā ho rāni jo allā nūn pānā (F.)
Sambal kamalā nā ho rāni jo thakur nu pānā (G)
- (c) Gasil ājam Ahmedyāra vane ta pahunce tenū (F.)
Radhakrishna ji Ahmedyāra vane ta pahunce tenū (F)
Quoted by Gobind Singh Lamba, *Punjabi Hatha Likhat Sahit*, p.13.

Palm-Leaf and other Manuscripts in Hindi

S. Subramanian

The earliest Hindi manuscripts belong to the sixteenth century. It is a collection of Gorakpanthi sayings in parchment and is in the India House Library. A line from this manuscript written in Kutila script says "Tagda Bol Chini Pandar Hiya" (Strong truths are spoken by Pundits).

There is another manuscript of Prem Sagar written by Lal wherein there is a handwritten page apart from printed pages where legibility is hampered by idiosyncrasy of writing like प, म and न, स, सि, ति, नि, सि etc. At many places numbers are used instead of words like No. 1 for Surya and Brahmin, No. 8 for directions and elephant, No. 5 for love, 12 for month and No. 121 for chaithra and so on. Reading a manuscript is a more different proposition than reading a lithographic inscription. Apart from stone inscriptions, the most ancient manuscripts we have today are the Dead sea Scrolls. These are the remains of a collection of Hebrew and Aramaic documents discovered near the Dead sea in the spring of 1947. These are leather scrolls. From their script it is evident that they belong to II century A.D. Had these writings been prepared in materials other than leather or stone, they would not have lost the ravages of time. In a bulletin called "The Palmyra Palm and its Uses" published by the Department of land records and agriculture, Madras in 1896 it has been stated "palmyra leaves were being used for writing purpose from third century but the earliest palm leaf manuscript belongs only to the eighteenth century". They are mostly found in the Madras presidency and the imperial presidency (i.e) Bengal presidency. Dr. Katre has stated that as per Nirkos the Indians were using a special kind of strong cloth for writing purposes. Dr. Katre also writes that a piece of silk cloth was found in Jaisalmer and writings of Jain scriptures have been found on it. Mr. Peterson found a whole book, handwritten in cloth at Anilwar Patna. Metal sheets esp. of copper were mostly used for recording gifts etc. A copper plate dating back to fourteenth century and in a private collection in United States has the following version in both Arabic and Nagari script. "*Keval Triveda Panth safar jet char meet pahar*" which means 'elders have decided that there are only three ways of life, presumably indicating Satwa, Raja and Tamas'. Another piece of Tamra Patra preserved in the British museum reads "*Deepmala jan andhkar, ghanita gtram udeyat nirantar dishi pavotavikar*".

There are also many works in inscriptions in ancient Hindi. The Hindi epigraphical material is mostly bilingual (i.e.) either Arabic and Hindi or Sanskrit and Hindi. In the new Catalogus Catalogorum it has been stated that considerable number of Sanskrit poets have been known from inscription. Works otherwise unknown in manuscript are known solely from inscriptions. The *"Indian Antiquarian"* Vol.XXI mentions the following Hindi or bilingual works *"Bela kishan Rukmini ri"*, *"Chait Prakash"*, *"Pratap katha"* and *"Vamsa saar"*. There are inscriptions of king Reewa of Madhya Pradesh pertaining to seventeenth century which speak of great ancestors having produced books: *Purukh puraw likne pustak nana jeevan charit pradhan*. The relevance of epigraphy as a source material for literature is best illustrated by the Mamandur inscriptions of Mahendra Pallava. The Mamandur inscription attests to the king having composed two prahasana's *"Mattavilasa"* and *"Bhagavadjukia"*. In the Andhrapradesh government epigraphy serial No.2 edited by P.V. Parabhama Sastri poems in Sanskrit engraved during the Kakatiya times at Hanumakonda which include two cantos of a Kakatiya Charita and sixty stanzas of a lyrical poem called Siddha Charita have been published.

Though these are in Sanskrit they have the touch of the local language. The word Api meaning "also" has invariably been written as *"Bhi"* which means "also" in Hindi. During Maratta times the historical work bearing on Sivaji and his family, the *"Siva Bharatha"* was inscribed on the compound wall of the big temple at Tanjore. One line reads *"Matru vandana hi parama pada pradayak, poorva purusha prarochita ukta"*. The Hindi influence can be felt in the use of the word 'hi'. In Bharathi bulletin of the college of Indology 1962-63 edition there is a mention of a Gorakhpur inscription which reads as follows: *"Ajja mahima rakka padi hown"*. In the Lalbhai Dalpatbhai Sanskriti Vidya Mandir, Ahmedabad we come across a manuscript. The manuscript is in palmyra leaves and there are some Telugu letters running continuously in the left hand corner and there are many dohas written by Vrindakavi and also some Jain literature. The Gujarati form has been used in many places like for kamal कमल etc. The Telugu letters in the right hand corner found in few leaves read ریتو Ritu and seem to be initials of the writer or some indication of a sort. There are many manuscripts of Ramacharithamanas of Tulsidas in paper of a thick variety. One manuscript contains the date in Saka Sambat *"Ram rasat dhiya ko lekhan brahma kamala ratna loka"*. Thus the manuscript pertains to the beginning of the eighteenth century. Similarly a paper manuscript of Jayasri Granthvali in Kaithi lipi has been found which was made use of by Ramachandra Shukla in his edition of Jayasri Granthvali. Dr. Mataprasad Gupta has mentioned of a paper manuscript of Jayasri

Granthvali pertaining to 1704 A.D. (1108 Hijra). The peculiarities inherent in Jayasri manuscripts are that the language is Awadhi or ancient Hindi but the script is mostly Persian (i.e) modified version of the Arabic script. The Persian Alif can be read both as "A" and Aa. In some places the Tashdeed sign is added to supplement clarity. In a consonant containing the vowel for the sound of u sometimes Pesh symbol is indicated. Dr. Bhagavati Prasad has mentioned of an illustrated Padmavat manuscript prepared in the court of Mohammed Shah Rangeela early nineteenth century. The manuscript starts this way आज इब्तिताए मुहम्मद शाह बादशाह गाजी खलदल्लाह मुल्कह ता लगायत शाम दहम ई किताब पदमाव बतस्वीर नफिक न तजवीज मुहम्मद सुलतान खान बदतमान रसीद

Due to inherent aspects of wrong comprehension and due to irrational substitution or combination of words various meanings have been constructed and spellings have been distorted. The printed versions of Padmavat have made use of at least forty kinds of handwritten manuscripts. Dr. Gupta has made use of the Manersharieff, Bihar shariff and the Rampur Manuscript. An illustration will be relevant here to indicate "Patabheda" जो रे लाय रक्त ले गये । प्रेम प्रीति नयनाई जल भये जोरी लाई रक्त कै लेई। गाढी प्रीति नैन जल भेई

Only four manuscripts of Padmavat have been found in Nagari or Kaithi lipi and in respect of Ramcharitmanas only one manuscript has been found in Persian Script mentioned as being in the private collection of Rampur family. The many manuscripts in paper of Prithvi Raj Raso and Khuman Raso reveal many curious aspects. Mahamahopadya Pundit Harprasad Sastri like Dr. U.Vē. Cāmināta Aiyar made many trips in Rajasthan in search of ancient Hindi manuscripts. The Asiatic society of Bengal has published details of the same. Apart from Manusmriti, portions of a *Sanskrit Rāmāyaṇ* and Tulasi *Rāmāyaṇa*, he came across various Jain manuscripts in Apabhramsa & Hindi and also many Raso Kāvya. He mentions a total of 786 manuscripts mostly written in paper and a few in a kind of red cloth. Many works of Swayambhu, Chaturmukh, Pushpa Dasta and Dharmapal, all Jain Poets, were found in remarkably good condition, copied in the middle of last century. As mentioned in the Nagari Pracharini Patrika 1944, (4) many manuscripts of Khuman Raso of Dalapathy Vijay were copied later in the nineteenth century and therefore interpolations are inevitable. Of the 108 odd manuscripts found in the Bharatpur palace only two belong to sixteenth century and the rest to early nineteenth century. The script in the sixteenth century manuscript uses archaic forms of अ, क, ऋ etc. As regards Prithvi Raj Raso, Dr. Wooler was of the opinion that the manuscripts so far found pertain only to nineteenth century and therefore are not authentic. But a manuscript found in a Jain library in Bombay indicates that the "Prithvi Raj Raso" as being written

in Apabhramsa *Chandass Gatha Raso Prahasha*. This manuscript pertains to seventeenth century A.D. The first history of Hindi literature was written in French by "Garcon Datassi". This book was called *Histoire de la literature Hindi et Hindustani*. He writes "I have seen many manuscripts and have also authenticated some with reference to date, period etc". His book was followed by *Shivsinha Saroj* which quotes many manuscripts mostly written in the late eighteenth century and early nineteenth century. In 1893 Grierson published his Modern vernacular literature of Hindustan. He has stated that paper manuscripts are found in various libraries and residences and that a few manuscripts of Padmakar's works are also found in palmyra leaves in a private collection in Warangal. Dr. Suryakant shastri in his *Hindi Sahitya ka Vivechatmak Itihas* mentions that he has seen two manuscripts of Tulsi Ramayana in palmyra leaves. A manuscript of "Prasanha Parijata" pertaining to early eighteenth century was found in Gorakhpur based on which Pundit Bhagwan Das Misra published his book "*Prasanha Parijatha*". The great Ramayan scholar Ramkumar Das had a copy of the manuscript of Prasanha Parijata wherein a few palmyra leaves have also been included with slokas and mention of Tulasi *Rāmāyāna*. The following passage from the Mss makes us doubt the veracity of the version being ancient. "The weaver Kabir will be insulted which will result in the decline of weaving and cloth industry in Bharat by the white people arriving on the western coast of India. But Kabir will be reborn as Mohandas. He will spread charka and the glory of Ram". This might be an interpolation or like Nostradamus - a forecast of the twentieth century in the fifteenth century. (quoted by Dr. Badrinarayana Shrivastav in his book *Ramanandh Sampradaya*).

Are there any manuscripts available in the original hand of the writer? The Gorakpanthi palmyra leaf manuscript from oriya available in the India office library is supposed to have been written by Gorakhnath himself. The *Ayodhya Kand* portion of Tulasidas's *Rāmāyana* in Rajapur is supposed to be in the handwriting of Tulasidas himself. A Panchanama in the collection of Kāshiraja mentions a full Ramacharithmanas in Tulasidas's hand. At Saraswathi Bhawan in Kāshi there is a paper manuscript of Uttarakānda of Vālmiki *Rāmāyana* written in the handwriting of Tulasidas. The last line reads

समाप्तं चेदं महाकाव्यं श्रीरामायणमिति॥

संवत् १६५१ समये मार्ग सुदी खौ लिखितम् तुलसीदासेन

There is also a manuscript in the collection of Jaipur palace of Behari Lal, supposed to have been written by Behari himself. Misra Bandhu has quoted some Dohas from this collection.

Many manuscripts mostly in paper and a few in palmyra leaves have been found and classified in Punjab. Three kinds of scripts are used - Dēvanāgarī, Gurmukhi and Farsi. Manuscripts of Patiala court poets Sujān Singh Man, Nichal and Ram have been found. These are written in Gurmukhi script in paper and are Hindi translations of Kalhana's *Raja Tarangini* and Abul Fazal's *Aina-Ye-Akbari*. Some manuscripts have also been found in Motibagh library, Patiala where a palmyra leaf manuscript is in Grantha script with leaf 14, 17 and 21 in Dēvanāgarī. The leaves speak of a book *Sringar Sorta*. A line from the leaf reads *Kuch mardan kara dhavya karat ninad nari, Par na paave purush dhrupal suta si sari*. The meaning is obvious but the language seems to be Vrajrabhasha of nineteenth century. Manuscripts of Sahib Singh Mrigendra's work *Rani Rajendramati charitha*, "*Phul bans prakash*", Bhagwansingh's "*Rajanama Rāis*", "*Jassa Singh Vinod*" are some of the paper manuscripts found in the collection available with the Punjab Archaeological Department. A manuscript of the later eighteenth century recording Guru Nanak's life and teachings has been found in Bhoodun (malerkotla). A few lines from the manuscript are given below:

अंगन संजोई सजै दीह और महु बजै
सिंदन ज्यों वीर गजै एजै नाहिं लर ते
दुंदुभी बजै अपार कटनति न बेशुमार
काहू को भई न हार कटग मरत

A few pages of "*Hakikat Rah Merka Shivrath Raje Ki*" in paper manuscript said to be in Guru Nanak's own handwriting have been found. There are two palmyra leaf manuscripts of Guru Govind Singh which are available at Harmandir Sahib. They have not been published and as per *Indian Antiquarian Vol. XII.*, they pertain to the *Rāmāyana* in Hindi written by Guru Govind Singh. It is well known that Guru Govind Singh wrote in Braj Bhasha.

Senapati's work "*Guru Shoba*" has been published by the Chandigarh University and it is mentioned that the paper manuscript was copied from a palmyra manuscript and the language is Chatteesgarhi. In the Motibagh library two paper manuscripts of *Satsaya Rāmāyana* and *Keerat Rāmāyana* written by poet Keeratsingh have been found. The language again is Braj Bhasha. One doha reads

राम सरोज पानी परसत होत तुरत उदघार
भव सागर तरन निमित्त यह बरें आधार

There is a *Ramayana* by Veer Singh 'Bal' called *Sudha Sindhu Rāmāyana*. A paper manuscript of the same written in Gurmukhi has been found in the Motibagh library. The language is Braj Bhasha with a liberal

dose of Punjabi in it. In the central public library, Patiala there are many palmyra manuscripts in Braj Bhasha written in Gurmukhi and one manuscript is in a paper covering wherein it has been mentioned "written over the direction of Guru Saheb". Iti Gurusahib uktan. Dr. Manmohan Sahgal mentions a manuscript of "*Sudama Charithra*" in Chatteesgarhi and found in the collection of a scholar in Cuttack. This manuscript is in palmyra and the first few leaves are in oriya script. A palmyra manuscript of "*Chand Ratnavali*" has been discovered in the collection of "*Chaganlal Vidya Ram Rawal*". The Ms runs to 122 leaves and has been prepared in Telengana. The first leaf of the script is in Telugu and the remaining in old Nagari. Some lines are reproduced below:

कर दण्ड बद्ध छन्द चन्दन शीतल अर्थ
इहि बानक विलसत रचना मधुर सुलस

The last leaf reads

इति वाग्मट विरचितम् छन्द रचनावलि भाषा सम्पूर्ण ॥

The word Bhasha normally stands for the fact that the work is in a language other than Sanskrit. Many other similar Riti works (i.e) works on Rhetorics and Poetics have been discovered in paper manuscript. There are nearly about 720 manuscripts of eighteenth century Riti works in the language Department of the Punjab University Patiala. The following works may be mentioned: Prastar Praksh Pingal, Prastar Prabhakar, Doha Bedawali etc. Hundreds of manuscripts from the household of Harnath Upadhyaya of Jhansi have found their way to Freet gallery and the Cleveland Museum in America. An illustrated manuscript of *Mahābhārata* with many pages in Hindi and the whole matter in Persian dating back to 1589 in paper is preserved in the collection of Maharajah of Jaipur. In the *Art of India and Pakistan*, a commemorative catalogue of the exhibition held at the Royal Academy of Arts London 1947-48, author Ashton Leigh says that these illustrative manuscripts are only a sample of the manuscripts and many more Hindi manuscripts have been indiscriminately sold in private auction. In the Chester Beatty library, Dublin, Ireland there are pages of Behari Satsayi wherein dohas have been illustrated. The script used is Persian.

In conclusion I would like to say that palmyra leaf manuscripts of Hindi works are not that profuse in availability as the paper manuscripts are. But we are hampered with the handicap of the absence of scholarly research in this direction.

THE PENINSULA OF INDIA.

Labials.	Semi-vowels.	Antants.	Vowels.	
p ph b bh m	y r l r	s sh x h n i u e ā		
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Assam.
प फ ब क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Kanik.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Gurumukha.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Nagari.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Bengali.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Urdu.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Gujarati.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Sindhi.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Kashmiri.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Telugu.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Canara.
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Grantha (Tulu).
प ष क्म	य र ल व	भ ष स ह ण ङ ण ण	अ इ उ ए ऋ	Tamil.

FURTHER INDIA AND THE ISLANDS.

Labials.	Neutral vowels.	Sibilants.	Vowels.	
p ph b bh m	y r l v	s sh s h a e u r a		
ပ ဗ ဘ ဘ ဗ	ယ ရ လ ဝ	၂ ဖ ဖ ဖ	အ ဓ ဓ ဓ	Kiowa.
ပ ဗ ဘ ဘ ဗ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Burmese.
ပ ဗ ဘ ဘ ဗ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Square Palu.
ပ ဗ ဘ ဘ ဗ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Singalese.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Pegu.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Abom.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Batak (Old.)
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Batak (New.)
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Batak.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Lampung.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Tagak.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Bany.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Macassar.
ပ	ယ ရ လ ဝ	ယ ဓ အ ဓ ဓ		Bagi.

प्र. सिन्धु, हिन्दी और उर्दू लिपियों की एकता प्र.

प्र. १८८८ II

साधारण हिन्दी-अक्षर	य	र	ल	व	श	ष	ह
दण्डाकार अवर्ण और शिरोरेखा रहित हिन्दी-अक्षर	८	८	८	८	१	८	८
उर्दू-अक्षर	८	८	८	८	८	८	८
सिन्धु-अक्षर	८	८	८	८	८	८	८
हिन्दी सानुनासिक अक्षर (साधारण)	ह	न	ण	न	म		८, ८, ८
शिरोरेखा और दण्डाकार अवर्ण रहित सानुनासिक-अक्षर	८	८	८	८	८		
उर्दू सानुनासिक-अक्षर	८	८	८	८	८		
सिन्धु सानुनासिक-अक्षर	८	८	८	८	८		
साधारण हिन्दी-अक्षर	प्र	आ	इ ई उ ऊ	८	८		
हिन्दी-समान्य	८	८	८	८	८		
उर्दू-अक्षर	८	८	८	८	८		
सिन्धु-अक्षर	८	८	८	८	८		

Palm-leaf and other Manuscripts in Gujarati

Kanubhai V. Sheth

Egyptians were the first to use palm-leaf to write their thoughts on. In India, we find the earliest references to palm-leaf as writing material in Buddhist's Jātakas*.

Jain scholars adopted the palm-leaf as writing material in 6th c. A.D. From 6th c. A.D. to 12th c. A.D. Jains used palm-leaf to write their manuscripts. After 12th c. A.D. paper was introduced as writing material. The use of palm-leaf went on upto 15th c. A.D. but after that it gradually decreased.

Types of Palm-leaves used as writing material

In Sanskrit palm-leaf is named 'Tāle'(ताले) or 'Tāla (ताला). In Gujarati it is called 'Tāda' (તાડા)

There are three types of Palm leaves:

1. Corypha umbraculifera (other name is 'Sritāla' or 'Sritāda')
2. Corypha taliera
3. Borassus flabelliformis or flabellifer (palmyra)

Out of these three, corypha umbraculifera is the best. It has thick, strong fibred leaflet and is broader and more durable than others. It grows in Ceylon and the Malabar coast. It is very common in the moist region of the Madras Presidency. In some places, the leaflets of Corypha elata were used where taliera was not available. Borassus flabellifer is very common in Konkan and Deccan. In ancient times sacred and holy scriptures were written on the leaves of this palm. Books made out of the leaves of this palm are usually 2 feet in length and 2 inches in breadth.

Methods of seasoning of Palm-leaf for writing

There are various methods for the preparation of palm-leaf for the purpose of writing:

1. When the leaves just began to spread out they were cut and separated from the trees. These separated palm-leaves were first

* Katanaka Jātaka; Mahasutasoma Jātaka, Kāma Jātaka; Chullachullakalinge Jātaka; etc.

dried, then boiled or soaked in water, then dried again and subsequently they were polished with stone or conch-shell and then cut into required sizes.

2. *Palmyra* (*Borassus flabelliformis*) Strips of the leaves were cut and smoothened carefully, then dried in the sun and finally rubbed with oil. The strips were then used for writing.
3. *Sritāla/tādas* tender leaves were first cut to the required sizes after separating the central ribs and then boiled in spring water. The boiled leaves were then dried first in the shade and afterwards in the Sun. The leaves thus treated were then made into rolls and kept in store. Before writing, such leaves were again subjected to a second process for smoothening and polishing.

Another method is described in a note on palm-leaf manuscript discovered from a collection of Cambay. According to this note, leaves were cut and separated from the trees, when these come out of their sheaths, and are delightfully soft. Then they were dried in the sun for at least seven days and then buried in the mud for three months. At the expiry of the period they were taken out and cleaned properly. The leaves were then dressed and cut to required sizes. Such leaves are known as seasoned palm-leaves. These were then used for writing purposes.

Generally '*sritāda*' is used in Gujarat; because its leaves are thin and beautiful and can be handled like paper, while the ordinary Palm-leaves are coarse, thick and difficult to handle. Moreover '*Sritāda*' can absorb ink. Ink cannot be used on ordinary *tāda* leaves on which a steel stylus was used for writing. During the operation of writing the leaf is held in one hand and the letters are scratched on the surface holding the stylus in the other hand.

Generally in North India reed pen was used for writing on palm-leaves, in South India however, letters were incised on leaves with a stylus and then leaves were besmeared with the powder of charcoal or soot. On some palm-leaf manuscripts, the carbon and gum ink was used merely on the surface. Such writings pose great problems as far as preservation of writing is concerned, because such writing is liable to abrasion or smudging by water.

Various sizes of Palm-leaf and method and style of writing

There are various sizes of Palm-leaf manuscripts found in various collections of manuscripts. *Borassus flabelliformis* type of Palm-leaf is

generally 2 feet in length and 2 inches in breadth. This is common in Konkan and Deccan.

The *Corypha umbraculifera* are generally 32 to 39 inches in length and 2 to 3 inches in breadth. (In the collection of Patan (Gujarat) there is a manuscript named 'Prameyakamal martandam' (પ્રમેયકમલમાર્તણ્ડમ) of 37 inches in length).

Palm-leaf Mss are very long in length and very short in breadth so leaves cannot stick together like paper manuscripts. To keep them in proper order palm-leaf Mss are pierced either with one hole in the middle or two holes on the left and the right side in the case of long Mss., through which strings are passed in order to keep the leaves together. Generally Mss are placed between wooden boards and occasionally in leather covers held together by means of strings of cotton or silk. Mss are then wrapped over with pieces of cloth or silk and then placed in large wooden boxes.

There is a special arrangement for numbering the pages of Palm-leaf Mss. On the left side there are usual numerical signs but on the right side the pages are indicated by distinct letters or syllables. Thus 1 is indicated by 'Sva', 2 by 'Sti', 3 by 'Sri', 100 by 'Su', 200 by 'Sa'. Old paper Mss are generally marked with number. Some paper Mss are numbered like Palm-leaf Mss. This is due to the fact that they were directly copied from palm-leaf Mss.

Palm-leaves are naturally in zigzag shape. It is narrow at one end and is broader at another end. So in the narrow portion less number of lines are written and in the broader portion, more number of lines are written.

Frame work or format of Palm-leaf Manuscripts

There is no division of words or letters in the palm-leaf manuscript but words are written continuously without any break. There are no punctuation marks at all. Writing is from left side to right side.

At the beginning of each palm-leaf manuscript there is one auspicious mark or symbol which is known as 'Bhale Mindu' (બલે મીંદુ) in Gujarati, which is the corrupt form of 'Om' (ૐ). After this there is salutation (નમસ્કાર) to any God. i.e. Ganeshāya namah (ગણેશાય નમઃ), Saraswatiya namah (સરસ્વત્યેનમઃ), Gurūbhyah namah (ગુરુભ્યનમઃ), Namoh Gārjināya or Namō Vitarāgāya (નમો ગર્જિનાય, નમો વિતરગાય) or namoh srvajnāya (નમો સર્વજ્ઞાય), etc. at the beginning of main text either in prose or poetry. In poetry at the end of every line there is one upward line at the end (|) (ચરણાંત) and at every end of stanza (શ્લોકાંત) there

are two upward lines (||) then the number of stanzas (श्लोकांक) is written and then there are two upward lines ('||'). At the ending portion of the manuscript there is the name of the author (कर्तृनाम), along with the name of his sect (गच्छपरंपरा), the tradition of his Guru (गुरुपरंपरा), date of composition (रचनाकाल), place name of composition (रचनास्थल), name of text or work (कृतिनाम), then date of copying (लेखनसमय). Sometime name of Scribe (लेखयिताम), sometime place of copying (लेखनस्थल) etc.

Palm-leaf manuscripts are generally written in black ink. Carbon ink has been used as a fluid for palm-leaf and paper manuscript since very early days and it is more or less permanent. In olden days carbon ink was made by mixing lamp-black or soot with glue or gum.

In paper manuscripts there are various methods of writing. Manuscripts written without any break i.e. continuously written like the trunk of an elephant is known as *Shuda* or *Shudha* (शुद्ध) or (शुद्ध).

The manuscript in the usual space for writing is split up in three parts, the central having the original text and the other two parts containing commentary in somewhat smaller handwritings. It is known as 'Tripātha' (त्रिपाठ) (three fold manuscript).

The manuscript in which the main text is written in the central portion of a page while in four marginal spaces are transcribed notes or commentary on the text, thus making a total of five pathās or written matter on a page is known as 'Pancapātha' (पंचपाठ) (Five-fold manuscript).

In copying manuscripts scribes sometime displayed their skill and taste. Sometime we find some letters in each line written in red ink while the rest in black in such a way that the red portions form a letter or a motif or a design.

Sometimes lines and letters are written leaving some intervening blank spaces in such a way that the left out blank or white spaces go to form a design or a symbol, which is known as 'Rikta-lipi' (रिक्त लिपि) writing.

The traditional method of preservation:

In ancient times Asvagandhā (अश्वगंधा) (a kind of herb) or Ghadāvaja or (घाडावज) camphor or tobacco leaves were kept along with the wrapped manuscripts in order to repel them from insects. Each Palm-leaf manuscript was tied with thread passing through the three holes (one is in the centre and two in the two margins on the sides) and a wooden board cut to size was placed on top and underneath; the thread passed through the holes bored also into these wooden-boards. Paper manuscripts were also similarly protected between two wooden boards in the beginning with sting. The

practice of using wooden 'Pātalīs' has been replaced by the use of hard card-boards, after decorated, with painted or printed cloth pasted on them. Some of these card-boards are decorated with fine 'Satin' or 'mushrum' or silken cover and have embroidered representative of astamangalas (अष्टमंगल) (eight auspicious marks or symbols) or the fourteen dreams seen by a would be Jina's mother - episode of Jina's birth, episode of Jina's previous births, episode of the marriage of Namināth-Rājemati etc.

Palm-leaf manuscripts were then wrapped by thick cloth (बंधन) and those wrapped manuscripts were kept in the wooden or in the aluminium boxes. Sometimes they were stored in paper boxes also. Sometimes the manuscripts in boxes may not be wrapped with cloth (बंधन). The wooden boards (pātalīs) which are kept up and down side of palm-leaf manuscripts were made of simple wood or black timber wood or teakwood or sometime sandal wood.

Sometimes small size of Palm-leaf Mss are kept in paper-made boards or kept in square boxes made of papers. Sometimes sandal wood or elephant teeth or leather boxes were used for keeping palm-leaf Mss.

Citronella oil was used as insect repellent but afterwards it was avoided as it was harmful to palm-leaf like drying oil. It is noticed that the red colour is considered as repellent; the silk cloth is also remarkably immune to book worms. So red coloured silk cloth should be used as a wrapper of palm-leaf Mss. Since palm-leaf is highly susceptible to desiccated condition, palm-leaf Mss should be stored or displayed in cool atmosphere. Underground cells are selected for the preservation of palm-leaf Mss.

Palm-leaf & other Manuscript Collection

Just as an advanced Society gives importance to libraries in modern times, manuscript collections were given same importance in the past. Like the collections of coins, clothes, vessels & scriptures, the collection of books or manuscripts was also cherished. Generally these collections were made by sages-Munis-Monks or Scholars. Due to this practice in the three traditions of India, namely Vedic, Buddhist and Jain, such collections came into existence, but in the Jain tradition there was a systematic arrangement for the collection of manuscripts etc. Large numbers of collections were made. Nowadays we come across generally Jain collections in plenty.

In India we come across two types of collections

1. One that is owned by individuals (or Private collection)
2. Another is owned by some associations (or unions or saṅghas)

In Vedic tradition generally we find collections of Manuscripts preserved in Brahmins' houses. They were permitted by scripture to make collections.

In the Buddha and Jain tradition activities of collecting manuscripts etc. were associated with sages or monks. Collections were made by themselves or were generally owned by some associations (or union or Saṅgha).

Since the Buddhist monasteries were abolished from India and its propaganda was mostly done out of India, manuscript collections of that tradition were taken outside India. Due to this reason in fact Buddhist manuscripts or books are found in Nepal, Tibet, China, Ceylon & Burma.

But due to religious restriction, Jain monks cannot travel out of India. So due to this reason all Jain manuscripts are preserved only in India. So in this condition in Northern India in Punjab and Uttarpradesh, in East India in Bengal, Bihar, in West India in Katch, Saurāshtra, Gujarat and Rajasthan and in South India in Karnāṭaka, Andhra, Tamilnadu, etc. we come across small or big manuscript collections. Generally these collections were of associations (or Saṅgha) ownership. It was preserved by associations (or Saṅgha). So due to this reason today in Jain tradition we come across many collections preserved since a very long time (sometime more than 300 to 400 years). Here we must note that in Jain tradition we come across the individual collections of Jain monks or private collections owned by some individual or trustee or Srāvaka.

Besides the above mentioned two types of collections in the last few years the third type of collections came into existence, which are attached or associated with some educational or research institutes. Generally this type of collections are formed out of the above - said two types of manuscript collections.

Nowadays we come across large numbers of manuscript collections of all the three types in different places in Gujarat.

Mss Collection

1. L.D. Institute of Indology, Ahmedabad's Collection

This institute was started by the inspiration of late Āgama Prabhākara Muni Sri Punyavijayaji and by the donation of late Sheth Sri Kasturbhai Lalbhai family in 1957 A.D. in Ahmedabad. This institute's collection was started with ten thousand valuable manuscripts donated by late Muni Sri Punyavijayaji. Afterwards by the generous co-operation of

late Muni Sri Punyavijayaji and the great efforts of former director Pandit Dalsukhbhai D. Malvania, the institute received as gift or donation thousands of manuscripts because of the generous co-operation of Jain monks and trustees of Jain Bhandaras. Now there are more than 70,000 manuscripts (both gifted and purchased). It preserves most-ancient copies of manuscripts on Palm-leaf, paper manuscripts and cloth on all subjects, secular and religious. Not only that but Ms written in golden and silver ink and with illustrations are also found in good numbers. It also contains painted manuscripts on Palm-leaf & papers, painted patas (on cotton as well as paper) of tantric worship (like the Vardhamāna-Vidhyāpata or the Surimantra-pata) or Patas with diagrams and illustrations of Jain cosmo-graphical concepts (like the Jambūdvīpa pata, the lokapūrsa and hell scenes, the Adhāi-dvīpa pata etc.), Citrapata (like the panchtirthi-pata or the vividha-tirtha pata) scrolls with illustrations of texts on silpa (mainly Vāstu-Pūjana etc.) and Jyotisa (mainly nimitta, astrology) or Vijnapāti-patras (letters of invitation to monks), Painted or embroidered-covers of Palm-leaf and paper manuscripts, embroidered wall-hangings, etc. painted wooden boxes for preserving manuscripts (for both palm-leaf and paper manuscripts) etc.

Manuscripts are written in Sanskrit Prakrit, Apabhramsa, old Gujarati, old Rajasthani, Hindi, Vrajabhāshā, Persian, Urdu, Udiya, Tamil, Telugu, etc. There are various subjects like, Vēda, Vedāntas, Upanishada, Smṛti, Itihāsa, Purāṇa Gīta, Rāmāyana, Mahābhārata, Jain Agama Nigam and its commentaries, Jain philosophy, Caritra and Kathā, Jain Stotras, Chanda, Vyākaraṇa kōsa, Kāvya, Nāṭaka, Alaṅkāra subhāsitās, Saṅgita, Jyotisa, Āyurveda, Jain commentaries on Non-Jain works, Mss of Historical importance, dated from 12th c. A.D. to 20th c. A.D. In the institute more than one hundred ancient palm-leaf Mss are well preserved. Each Ms. is tied with thread through three holes (or two) one in centre and the other two in two margins on the sides and wooden board cut to size is placed on top and underneath, the thread passed through holes bored also into these wooden boards. Each manuscript is put in a wooden (or tine) box. All these boxes are kept in steel cupboards.

The Institute has a fumigation chamber. In case of palm-leaves which are attacked by insects or damaged paradichlorobenzene fumigation treatment is carried out. For preservation of Mss in all cupboards (in which palm-leaf and paper Mss are kept) Paradichlorobenzene (B.D.H.) and naphthalene flakes are used. The Descriptive Catalogue (in four parts) has already been published. It includes somewhat 15000 Mss written in

Sanskrit, Prakrit and Apabhrams. The Descriptive Catalogue of old Gujarati Manuscripts is also published by the Institute.

The cataloguing work of remaining Mss (out of the total 70,000 Mss) L.D.No. 57,000 has been done. The remaining manuscripts are only listed.

2. Gujarat Vidya Sabha (B.J. Research Institute's Collection)

This collection is with B.J. Research Institute, Ahmedabad. About 10,425 Mss are well preserved in the Institute in wooden boxes. It covers 300 Persian & Arabic, 7,000 Sanskrit, Prakrit, 3,100 Gujarati, Marati, Hindi etc. and 23 Palm-leaf Mss.

Descriptive Catalogue of Sanskrit-Prakrit Mss (Part I-II) and Descriptive Catalogue of Gujarati, Hindi etc. (Part III), Descriptive Catalogue of Persian-Arabic (Part I-II) and Descriptive Catalogue (Part III) are already published.

3. Pracyā Vidya Mandira, Baroda's Collection (M.S. University, Baroda)

This institute has about 27,000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Rajasthani, Telugu, Kannada, Granth, Malayam, Bengali, Śārada, Navari, Udiya, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects like Vedas, Upanishads, Vyākaraṇa, Jain Agama, etc. & some non-Jain Mss are also preserved here.

There is one Ms namely 'Harīlīlā Sodashakala' (illustrated) in Sanskrit. Ms of Bhāgavat Pūrana is well preserved. There is also an illustrated Ms of 'Panchratnagīta'.

Descriptive Catalogue (in 13 parts) of this institute is already published.

4. Gujarat Vidyapith Library, Ahmedabad.

It contains about 437 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, Hindi, etc. dated from 12th c. A.D. to 19-20th c. A.D.

1. Hindi Mss 9
2. Sanskrit Mss 169
3. Gujarati Mss 61
4. Prakrit Mss 198

There is one Ms. about Sāntināth by Bhāvachandrasūri dated 1479 A.D.

5. Chunilal Gandhi Research Institute, Surat (M.T.B. College's Collection)

This institute is managed by Sarvajanic Education Society, Surat. It contains Mss written in Sanskrit, Prakrit, Apabhramsa and Old Gujarati and they are well preserved. Catalogue is already published.

6. Indological Research Institute, Dwārakā (Sardapith Research Institute's Collection)

It contains Mss mostly written in Sanskrit dated from 14th c. A.D to 19-20th c. A.D. on Brahmanical Literature on various subjects.

7. Mahāvīr Jain Arādhana Kendra, Kobā (Ahmedabad's Collections)

It contains more than 1000 Palm-leaf and more than 1,50,000 paper Mss. The collection includes Jain Āgam; Grammar, Logic, Philosophy, Language, Literature and other subjects. It also contains Mss written in golden and silver ink. It has also preserved illustrated Mss both palm-leaf and papers. Systematically lists of Mss are prepared with the help of computers.

8. Forbes Gujarati Sabhā, Ahmedabad's Collections.

It contains more than 1800 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, Marathi, Hindi etc. It contains Historical manuscripts about Gujarat and Rajasthan. It has also included the Mss of Ākhyana, Kāvya, Nāṭaka, Caritra, Kathās, Alaṅkāra, Saṅgīta, Vēda, Gīta, Jyōtisa, Vyākaraṇa and Kōṣas.

Some important Mss are as follows:

1. Yōgashatābhindhan (योगशताभिधान) in Sanskrit by unknown author (Forbos No.109/2) Folios 34; copied in 1635 A.D.
2. Astapadī (अष्टपदी) by Jayadeva in Sanskrit (Forbas No. 81) Folios 12 copied in 1613 A.D.
3. Sūdāmāknyana (सुदामाख्यान) by Premānanda in Gujarati (Forbas No. 213) Folios 18 copied in 1649 A.D.
4. Padasaṅgrah by Kabir in Hindi (Forbas No.370/5) Folios 92-100 copied in 19th c. A.D.

Saṅgha Bhandara or Second type of Ms Collections

Now we will give information about the second type of collections, which are owned by some association (or union or Saṅgha).

There are twelve collections at Ahmedabad, four collections at Pātan, three collections at Baroda, three collections at Chāni, four collections at Cāmbay; three collections at Dabhoi, two collections at Idar, one collection at Sinor, eleven collections at Sūrat, four collections at Kapadavanja, two collections at Līmdī, two collections at Sāñanda, two collections at Viramgām, three collections at Jāmanagar, three collections at Bhavnagar, seven collections at Pālītānā, one collection at Sipor, Sūrendranagar, Vadanagar, Veda, etc.

In these collections there are thousands of Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

1. Pandit Rūpavijayaji Jñānabhandāra (Dehlā Jain Upāsraya bhandāra, Doshivādā ni Pole, Ahmedabad)

This collection is perhaps the oldest Saṅgha bhandāra. It is connected with Dehlā Upāsraya. It contains more than 18,000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Rajasthani etc., dated from 12th c. A.D. to 19-20th c. A.D. It includes besides manuscripts (paper and palm-leaf) on various subjects, painted manuscripts on Palm-leaf and paper, painted patas of tāntric worship or patas with diagrams and illustrations of Jain cosmographical concepts citra pata, scrolls, with illustrations of Jyōtisa, painted wooden book-covers of Palm-leaf and paper manuscripts, Vijnāpti-patras, painted wooden boxes for preserving manuscripts etc. It is well preserved in wooden boxes and these wooden boxes are kept in cupboards. A descriptive catalogue is prepared and ready for publication.

2. Vijayanemisūri Jñānabhandāra (Vijayanemisūri Jñāna Mandira Panjara Pole, Ahmedabad)

It contains 22 Palm-leaf Mss & more than 20,000 paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12-13th c. A.D. to 19-20th A.D. on various subjects.

3. Samvegī Jain Upāsraya Jñānabhandāra (Pagathiyāni Pole, Ahmedabad)

This is a very old collection. It contains about 8000 paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani dated from

12-13th c. A.D. to 19-20th c. A.D., on various subjects. Catalogue is already prepared and written in Register.

4. Vimalagaccha Bhandāra (Devasānā Pādāno Upāsraya), Ahmedabad.

It contains about 6000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th to 19th c. A.D. on various subjects.

5. Jain Prācyā Vidyā Bhavan (Paldi), Ahmedabad's Collection

It contains about 3500 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. on various subjects. It also contains art pieces like miniatures, Paintings, Vijnatipatras, Scrolls etc. dated from 16-17th c. A.D. to 19th c. A.D.

6. Parśvacandragaccha Upāsraya (Sāmalā Pole, Ahmedabad's Collection)

It contains about 3000 Mss (Palm-leaf and paper) written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, Persian etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. It also contains painted manuscripts on Palm-leaf and paper, painted Patas, Scrolls with illustrations etc.

No descriptive catalogue is available.

7. Virvijaya Sāstra Saṅgraha (Bhathini Bari), Ahmedabad:

It preserves about 700 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. on various subjects dated from 12-13th c. A.D. to 19-20th c. A.D. They are kept in wooden boxes. No catalogue is available.

8. Vijayanītisūri Jnānabhandāra (Lūvārnī Pole), Ahmedabad.

This collection has preserved about 3000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. on various subjects dated from 12th c. A.D. to 19th c. A.D.

They are kept in steel cupboards.

9. Nītivijaya Jain Pūstakālaya Jnānabhandāra (Gandhi Road), Ahmedabad.

In this collection are 3000 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. on various subjects dated

from 12th c. A.D. to 19th c. A.D. It is systematically preserved in steel cupboards. Descriptive catalogue is not prepared but Mss are listed and written in Register.

10. Shri Vijayadānasūri Jain Granthbhandāra (Kalupura), Ahmedabad

This collection has preserved about 5000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th c. to 19th c. A.D. on all subjects. It is well preserved in boxes and the boxes are kept in cupboards. A catalogue is prepared but has not been published.

11. Sūrendrasūri Jain Granthbhandāra (Patani Khādaki), Ahmedabad.

This collection has preserved about 5000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani dated from 12th c. A.D. to 19-20th c. A.D. on various subjects. It is well preserved in cupboards. Catalogue is prepared and it is copied in Register systematically.

12. Jainshālā Granthbhandāra (Doshivādānī - Pole), Ahmedabad.

This collection has preserved about 5000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 11-12th c. A.D. to 19-20th c. A.D. on various subjects.

Mss are well preserved in steel cupboards. Descriptive Catalogue is not prepared but Mss are listed and entered in Register.

Manuscript Collections at Pātan.

Pātan (Anhilapātaka), the ancient capital city of Cāulūkyas and Solanky rulers of Gujarat, has many collections of manuscripts. It has one of the most prestigious collections in its Hemacandrācārya Jain Jnāna-Mandira.

1. Hemacandrācārya Jain Jnānamandira (Jnānabhandārā)

This Jnānabhandārā or Manuscripts library is named after Hemacandrācārya (1080-1172 A.D.), a prolific writer and one of the greatest Jain Scholars. This collection has to its credit the most ancient works on a variety of subjects written on Palm-leaf and paper. It has been well preserved for several centuries. It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, Hindi, Marathi, Vrajbhāsa etc. dated from 12th c. A.D. to 18-19th c. A.D. on various subjects. It includes besides manuscripts (Palm-leaf, paper etc.) on various subjects, painted

Manuscripts of Palm-leaf and paper, painted Patas (on cotton as well as on paper) of tantric worship (like the Vardhamāna-vidyā pata or the Sūrimantra-patas) or Patas with diagrams and illustrations of Jain cosmographical concepts (like the Jambūdvīpa pata, the Lokapurasa pata and hell-scenes, the Adhāidvīpa pata, etc.), Cītrapata like the Panch-tīrthī-pata, or the Vividha-tīrtapata, Scrolls with illustrations of texts on Silpa (mainly Vāstū-Pūjana etc.), Vijnapti-Patras (letter or Invitation to monks) painted or embroidered Pāthāns, painted wooden book-covers of Palm-leaf and paper Mss etc.

The Descriptive Catalogue of Manuscripts of this collection is published in three volumes (in four parts) in Dēvanāgarī Script compiled by Muni Shri Pūnyavijayagi and edited by Muni Shri Jambūvijayagi.

2. Saṅghavi Pādā Jain Bhandāra, Pātan.

This has a famous palm-leaf Ms. collection (formerly preserved upto 1975 at Saṅghavi Pādā's Upāsraya) now preserved in Hemacandrācārya Jnāna Bhandāra, Pātan. It contains 413 pothis; most of them are single works though there are many which consist of more than one work. It contains old and important Jain and Brahmanical works. Mss are written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati literature, etc.

3. Khetaravasi Jain Jnānabhandāra, Pātan (Now at Simandhara Mandira, Mehsana).

This is one of the most important collections with 76 (Now Pothis 57) Palm-leaf Mss. It contains some rare Jain Mss. It contains Mss written in Sanskrit, Prakrit and Apabhramsa.

4. Bhābhā Pādā - Vimalgaccha Jain Jnānabhandāra, Pātan.

It is a collection of Vimal branch of tapāgaccha. It contains 3206 paper Mss of most important value in fairly good condition. It includes Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. dated from 12th c. A.D. to 19-20th c. A.D. on various subjects. Detailed catalogue is already published.

5. Dariyāpuri Sthānkavāsi Jain Jnānabhandāra, Pātan.

It contains 5000 paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated 12th c. to 19-20th c. A.D. on various subjects. The collection is well preserved.

Manuscript Collections at Baroda

There are three Jain Jnānabhandāras (Manuscript collections) in Baroda.

1. Sri Mūktikamal Mohan Jnānabhandāra (Kothi Pole) Baroda - 5000 Mss.
2. Sri Kāntivijaya Sāstrasaṅgraha (Narsimhajini Pole) Baroda. 7664 Mss.
3. Sri Hamsavijayagi Granth Bhandāra (Narsimhajini Pole) (Sri Ātmārām Jain Jnāna-Mandira) Baroda-4363 Mss.

1. Sri Mūktikamal Mohan Jnānabhandāra, Baroda.

It contains about 5000 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. copied from 12th c. A.D. to 19-20th c. A.D., on various subjects.

2. Sri Kāntivijayagi Sāstra Saṅgraha, Baroda

It is due to the effort of the Jain monk late Pravartaka Kāntivijayagi, this collection was established and put in order. It has preserved Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. Catalogue of manuscript is already prepared. It is copied in two parts, in one part Sanskrit, Prakrit etc. Mss are listed and in another part Gujarati Mss are listed.

3. Sri Hamsavijayagi Granthbhandāra, Baroda.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 13th c. A.D. to 20th c. A.D. on various subjects.

Manuscript Collections at Chāni (Near Baroda)

There are three Bhandāras at Chāni.

1. Pravartaka Kāntivijayagi Saṅgraha (Vāṇiyāvādā) Chāni (3 Palm-leaves and 1120 paper Mss.)
2. Hamsavijayagi Saṅgraha (Vāṇiyāvādā) Chāni.
3. Vīravijayagi Sāstra Saṅgraha (Vāṇiyāvādā) Chāni.

1. Pravartaka Kāntivijayagi Saṅgraha, Chāni.

It contains 3 Palm-leaf & 1120 paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th c. A.D. to 19th c. A.D. on various subjects.

2. Hamsavijayagi Saṅgraha, Chāni.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 13th c. A.D. to 20th c. A.D. on various subjects.

3. Vīravijayagi Sāstra Saṅgraha, Chāni.

It has preserved Mss written in Sanskrit, Prakrit, Apabhramsa Old Gujarati, Old Rajsthani etc. dated from 13th c. A.D. to 19th c. A.D.

It contains one illustrated Ms. namely 'Odhaniryukti' of Bhadrabāhu in Prakrit copied in 1106 A.D. It has 21 illustrations i.e. 16 Vidhiyādeva, Sarasvatī, Laxmī, Ambicā.

Manuscript Collections at Cambay

Cambay is another important place in Gujarati having ancient manuscript collections of both Palm-leaf and paper.

Today in Cambay there are four manuscript collections.

1. Sāntināth Palm-leaf Jain Bhandāra (Mānekchok), Cambay.
2. Nitivijaya Jnānabhandāra (Jainshālā), Cambay.
3. Vijayanemisūri Jnānabhandāra (Khārvodā), Cambay.
4. Pārsvchandragaccha Jain Bhandāra (Bhatrūchandra granthbhandāra) (Bold Limdā), Cambay.

1. Sānstināth Bhandāra, Cambay.

It is the most important Ms Collection of ancient times having 150 Palm-leaves and 2375 paper manuscripts written in Dēvanāgarī script in Sanskrit, Prakrit, Apabhramsa etc. dated 12th c. A.D. to 16th c. A.D. These Palm-leaf Mss are of great importance from the view-point of editing and studying of original texts, Jain Āgama, the treatises on Jain Karmavāda, the ancient narrative literature in Sanskrit, Prakrit, Apabhramsa, etc. works on Indian philosophical system; on Grammar and lexicography, the Kāvyaś, the Nātakas, treatises on tāntric, the sūbhāśitas. Mss preserved here are unique in the sense that no other copies of the works are available anywhere else.

2. Nitivijaya Jnānabhandāra, Cambay

It contains about 4000 Mss generally composed by Jnānavimalasūri (18th c. A.D.). It has also preserved commentaries by Yasovijayagi in Gujarati upon Jnānavimalasūri's work.

3. Vijayanemisūri Jnānabhandāra, Cambay

It has preserved about 20,000 Mss collected by Ācārya Nemisūri himself. Mss. are written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. It has preserved, the manuscript of 'Lokaprakas' copied by the author Vinayavijaya himself (स्वहस्ताक्षर ग्रन्थ).

Some Important Mss are as follows:

1. Kalpādhyayanāvcūrnī (Vijayanemi collection) copied in 16th c. A.D. It has only one illustration.
2. Kalpasūtra by Bhaerabāhu (Vijaynemi collection) folios 56, copied on paper with silver ink in 16th c. A.D.

4. Pārsvachandragaccha Jnānabhandāra, Cambay:

It contains about 1500 Mss (included some palm-leaf Mss) written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12-13th c. to 19-20th c. A.D. on various subjects.

Manuscript Collections at Dabhoi

There are three manuscript collections-bandaras at Dabhoi

1. Shri Muktabai Jain Jnānamandira granthbhandāra
2. Shri Raṅgvijayagi Sāstra Saṅgraha (Yashovijayagi Jnānamandira)
3. Amaravijayagi Jain Jnānamandira granthbhandāra.

1. Shri Muktabai Jain Jnānamandira granthbhandāra.

It contains 15000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc., dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

It is well preserved in wooden boxes. Descriptive Catalogue is prepared but not published.

2. Shri Raṅgviṇyayi Sāstra Saṅgraha.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc., dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. Mss are well preserved and kept in wooden boxes.

3. Amaraviṇyayi Jain Jnānamandira granthbhandāra.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. Mss are well preserved and kept in wooden boxes.

Manuscripts Jnānabhandāra at Idar (North Gujarat)

There are three Mss Collections at Idar.

1. Anandji Mangalgi ni Pedhi's Collection, Idar

It contains both Palm-leaf and paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 12th c. A.D. to 19-20th c. A.D. on various subjects.

There are important palm-leaf manuscripts of *Kalpasūtra* and *Kālkakathā*. They were copied in 14th c. A.D. They have illustrations in golden ink. Pictures of many episodes of *Kalpasūtra* are drawn in this manuscript. i.e. Astha Mangalika, Birth of Mahāvīr, Birth & liberation of Pārsvanāth, his Yaksha and Yakshī liberation of Rūṣabhanāth.

2. Digamber Jain Bhattaraka Bhandāra, Idar.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 12-13th c. A.D. to 19-20th A.D. on various subjects. It has also preserved illustrated manuscripts of *Tirthankarscarita*.

3. Ātam-Kamal-Labdhisūri Sāstra Saṅgraha,

It contains about 7000 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th c. A.D. to 19-20th c. A.D. on various subjects.

Manuscript Collections at Surat

Surat is one of the important centres for preserving Jain Manuscripts from old time. In Surat nowadays there are eleven Ms. Collections.

1. Jain Ānand Pūstakālya (Bhandarā, Gopipura) Surat

It is a well-known collection in Surat. It contains about 3100 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

Mss are well preserved and kept in wooden boxes. Catalogue of Mss is already prepared, but not published.

2. Shri Mohanlālji Jnānabhandāra (Gopipurā) Surat.

It contains about 2700 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

There are somewhat old copies of Jain Āgama and its commentaries are well preserved in wooden boxes. The list is prepared and published.

3. Ādināthgi Mandīra's grantbhandāra (Ādināth Jain temple, Gopipurā) Surat.

It contains 1612 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

The list is already prepared.

4. Shri Jinadattasūri Jnānabhandāra (Kharetargaccha Jain Upāsraya, Gopipurā) Surat.

This collection is of Kharatargaccha. It contains 1029 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. on various subjects.

5. Hukam Munigi Jnāabhandāra (Gopipurā) Surat.

It contains about 711 Mss. written in Sanskrit, Apabhramsa, Old Gujarati, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. Mss. are well preserved. The list is prepared.

6. Vādi Upāsraya (Sheth Nemachand Melāpchand's Collection) Jnānabhandāra (Vādi Upāsraya, Gopipurā) Surat.

It contains about 891 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati on various subjects.

7. Devachand Lalbhai Jain Jnānabhandāra (Gopipurā) Surat.

It contains about 386 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

8. Shri Dharmanāths Mandir Jnānamandira (Gopipurā) Surat.

It contains 1047 Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. on various subjects. Mss are well preserved.

9. Chītāmanī Pārsvanāth Shah Jnānabhandāra (Gopipura) Surat.

It contains about 170 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 12-13 c. A.D. to 19-20th c. A.D. on various subjects. Mss are in a good condition.

10. Shrimandhār Swāmi Jnānabhandāra (Gopipurā) Surat.

It contains about 786 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. on various subjects dated from 12th c. to 20th c. A.D.

11. Bālūbhai Amarachand Jnānabhandāra (Vadāchūta) Surat.

It contains about 338 Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. Mss. are well preserved.

Ms. Collections at Bhāvnagar

There are three Ms collections at Bhāvnagar.

1. Ātmānanda Jaina Sabhā, Bhāvnagar.
2. Dosābhai Abhecand Pedhi, Bhāvnagar.
3. Jaina Dharmaprasāraka, Bhāvnagar.

1. Ātmānanda Jainasabhāsabhā, Bhāvnagar.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, etc. dated from 13th c. A.D. to 19th c. A.D. on various subjects.

2. Dosābhai Abhecand Pedhi, Bhāvnagar.

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th c. A.D. to 19th c. A.D. on various subjects.

3. Jaina Dharmaprasāra Sabhā, Bhāvnagar.

It contains Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

Ms Collections at Jāmnapur

There are three Jnānabhandāra Ms collections at Jāmnapur namely:

1. Shri Jain Ānand Jnānamandir (Devebāga Upāsraya)
2. Shri Dungarsingagi Stha. Jain granthbhandāra.
3. Shri Anachalgaccha Upāsraya Jnānabhandāra.

In these granthbhandāras there are Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rājasthāni etc., dated from 13th c. A.D. to 19-20th c. A.D. on various subjects.

Ms Collections at Kapādarānjan

In Kapādarānjan there are five granthbhandāras (Ms Collections)

1. Abhayadevasūris Jain Jnānabhandāra.
2. Muni Suryodāyasāgar Jnānabhandāra.
3. Mithābhai Gūtabcanda Jnānabhandāra.
4. Shri Astapada Jnānabhandāra.
5. Shri Manekbhai Jnānabhandāra.

In these places there are Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects. All Bhandāras are well preserved.

Ms Collection at Utakanthesavar

There is one Manuscript Collection in Utakanthesavar. It contains paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 13th c. A.D. to 20th c. A.D. on various subjects.

Manuscript Collections at Līmadi

There are two Ms collections - (granthbhandāras) at Līmadi. Līmadi is the central place of Sthānkavāsi Jain.

1. Shri Gopalswāmi Granthbhandāra
2. Shri Ajarāmara Swārai Jnānabhandāra.

1. Shri Gopalswāmi Granthbhandāra

It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 13th c. A.D. to 19-20th c. A.D. on various subjects.

They are well preserved and kept in wooden boxes. A list of Mss is written in Register.

2. Shri Ajarāmara Swārai Jnānabhandāra

It is a well known bhandāra of Sthānkavāsi Jain. It contains Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani, etc. dated from 12-13th c. A.D. to 19-20th c. A.D. on various subjects.

Pārsvacandra gaccha Upāsraya's Jnānabhandāra, Māṇḍal

It contains Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Rajasthani etc. dated from 12th c. A.D. to 19-20th c. A.D. on various subjects. It contains some illustrated Mss. also.

Uttarādhayansūtra in Prakrit (Parsvo Maṇḍal No.5) Folios 77 copied in 1448 A.D. It has 77 illustrations.

Manuscripts of Gujarat outside Gujarat

(1) Rājasthān Oriental Institute.

The Institute contains manuscripts written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati, Old Rajasthani etc. dated from 12th c. A.D. to 19-20th c. A.D. on various subjects.

Generally all these Mss are recollected from various Bhandāras of Gujarat and Rajasthan, it should be noted here. Descriptive catalogue is already published in four parts. It contains about 15,000 Mss. on various subjects like Vedas, Vedic history, Purāṇa, Buddhist and Jain philosophies etc.

(2) Collections of Manuscripts at Jesalmer.

Jesalmer is another place where there are many manuscript collections. In ancient time Mss. of Pātan bhandāra were transferred to Jesalmer due to some political disturbances. In Jesalmer there are ten Jnānabhandāras:

1. Jinabhandāra Jnānabhandāra (Preserved in Fort): 403 Palm-leaf + 1000 paper Mss.
 2. Vēgadagaccha Jnānabhandāra (Kept in Fort).
 3. Kharatar gaccha Upāsraya bhandāra (Pancano bhandāra) (Now preserved in Fort); 23 palm-leaf Mss.
 4. Achārya Vṛuddhicandra Yati no Jnānabhandāra. (Kharatar gaccha Vidā Upāsraya)
 5. Yati Laxmicandraji Jnānabhandāra
 6. Acāryagaccha Upāsraya Jnānabhandāra
 7. Tharūshah Jnānabhandāra
 8. Yati Shri Dugarji Jnanabhandāra
 9. Lonkagaccha Jnānabhandāra 45 Palm-leaf Mss.
 10. Tapāgaccha Jnānabhandāra 6 Palm-leaf Mss.
1. **Jinabhandāra Jnānabhāndāra**

This is one of the important Ms collections of Palm-leaf. It contains 403 Palm-leaf Pothis, and about 750 works on all subjects.

Some oldest Mss preserved in this collection date back to 10th c. A.D.

2. **Vēgadagaccha Jnānabhandāra**

This collection was established by Kharatargaccha's branch Vēgadagaccha's Acāryas. It contains manuscripts written in 20th c. A.D. copied according to the aspirations of Jinakrupacandrasuri. In this bhandara we can see also manuscripts which were copied by Jinabhandra for patan's bhandāra. All Manuscripts are on paper.

3. **Pancano Bhandāra:**

It contains 23 palm-leaf & paper Mss. written in Sanskrit, Prakrit, etc. dated 12th A.D. to 20th c. A.D. on various subjects.

4. **Vāgadagacchiya Jnānabhandāras** (Jinabhara collection of paper Mss.)

This collection contains in all 83 Pothis (1-1330 works) written in Sanskrit, Prakrit etc. dated 15th c. A.D. to 19th c. A.D. on various subjects etc.

5. Vada Upāsarayabhandāra (Kept in Fort)

It contains 927 paper Mss. written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. dated from 14-15th c. A.D. to 19-20th c. on various subjects.

6. Tapāgaccha Jnānabhandāra

It contains 7 Palm-leaf Mss. and one paper Ms. written in Sanskrit and Prakrit, dated from 12th c. A.D. to 18th c. A.D.

7. Lonkāgaccha Jnānabhandāra

It contains both Palm-leaf & paper Mss written in Sanskrit, Prakrit, Apabhramsa, Old Gujarati etc. dated 12th c. A.D. to 19th c. A.D. on various subjects.

It contains 9 Mss about Āgama and its commentary written from 12th c. to 14th c. A.D.

8. Tharūshah Jnānabhandāra

It contains some paper Mss.

Some important Mss. are as follows:

1. Angavijjā written in 1613 A.D.
2. Kalpasūtra by Bhadrabāhu in Prakrit copied in 1463 A.D. by Mantri Vāchaka in golden ink.

There is a primary information about different Grantha Bhandāras at different places in the entire nation. It seems necessary that a systematic survey of these Grantha Bhandāras should be done.

Palm-Leaf Manuscripts in Marathi

Saroja Bhate

The history of Marathi Manuscripts (Mss) begins in the fifteenth century A.D. to which the oldest available Marathi Mss belong. It is generally believed that the practice of writing in Marathi started sometime in the 12th century A.D. It can be, therefore, said that we have no Mss in Marathi of the first three centuries available to us. Historians maintain that the activity of producing Mss in Marathi continued till late 19th Century till the art of printing was introduced in the country. The history of Marathi Mss thus covers a period of 600 years out of which records are available for the later nearly 400 years.

Research in Marathi Mss is not older than 100 years. It was mainly motivated by the British rulers who were interested in the historical records. Indologists and historians in their search for Sanskrit or historical Mss brought to light many hidden treasures of Mss in Marathi. The most noteworthy among the historians who created an awareness about Mss are, the late Mr. V.K. Rajwade, Vasudevshastri Khare, S.K.Deo, D.V.Potdar, T.S.Shejwalkar and Dr. Pisurlekar. These scholars collected a large number of Mss from different corners of Maharashtra and other states on its boundaries. These Mss contain, mainly, historical documents such as letters, contracts, and bakhars on the one hand and devotional songs on the other. A large number of Mss of literary compositions such as poems, dramas and stories were also found. The prominent collections of Mss were found in the palaces of certain kings, houses of certain political leaders and in the temples as well as mutts.

It is interesting to note that the places where Marathi Mss are stored are not confined to the present Maharashtra. They are found in places like Madras, Hyderabad and Tanjore in the south and Varanasi in the north. Moreover, a few Marathi Mss are also located in some libraries in England.

There are about thirty places, either private or public organizations, where Mss in Marathi are preserved. A statistical data of the Mss in these places reveals that around 12,000 Marathi Mss are preserved in different collections (on the basis of the data made available so far). Some of the libraries have already published descriptive catalogues of the Mss whereas in some other collections only lists, and sometimes only handlists, are

prepared. The Sarasvati Mahal library, Tanjore has, for instance, published three volumes with one supplementary Volume of the descriptive catalogue. Here the Mss are classified under 18 different topics as follows:

Vedānta, Purāṇa, Rāmāyaṇa, Bhārata, Bhāgavata, Kathākālpa, Aitiḥāsika, Kāvya, Nāṭaka, Kahānis, Stotras, Kōṣa, Vaidyaka, Kāmasāstra, Saṅgita, Dhārmika, Prakīrṇa and Notebooks. Similarly in the catalogue of Marathi Mss in the India Office Library, London the Mss are classified under the following heads:

Religion, Philosophy, Science, Grammars and Dictionaries, Poetry, Tales, Legends and fables, History and Geneology, Geography and topography, Letters and official documents and miscellaneous.

On the other hand, Mss in the collections of Marathi Samshodhan Mandal as well as Marathwada Vidyapith Aitihasik Vastu Samgrahalaya, Aurangabad are arranged alphabetically. In the former there is no scope for classification since almost all the Mss are devotional songs. The Mss found in mutts of the well-known Saint Ramadas are similarly devotional and philosophical works composed by him and his followers.

All the available Marathi Mss are written on paper with the exception of a very few Mss of drama which are written on palm leaves. They are written in Dēvanāgarī, Balbodh or Modi. These latter are in the possession of the Sarasvati Mahal library, Tanjore. Dr. S.R. Kulkarni records in his book, *Pracin Marathi Hastalikhite Samshodhan ani Sampadan* (1992) the Mss of Rasakaumodi by Vitthal Galanda in the collection of the library of Osmania University, Hyderabad, as the oldest available Ms. It belongs to Saka 1456 (1534 A.D.). The Ms of Vachaharaṇa of Damodar Pandit from the same collection also belongs to the same year. S.R. Gavaskar in his descriptive catalogue of Marathi Ms of Marathi Samshodhan Mandal refers to the oldest copy of *Jñaneshvari*, the well-known philosophical work in Marathi, as belonging to Saka 1337 (1405 A.D.).

The work of publishing Marathi Mss started at the end of 19th Century. First to be published were the historical documents. Vasudevashastri Khare published 12 Volumes which were followed by 22 Volumes edited by Mr. V.K. Rajwade. The Sarasvati Mahal Library has, so far, (till 1986) published 60 Mss which deal with religious as well as secular themes. There are yet many interesting Mss which can not only throw light on the cultural history of Maharashtra but also can help interpret certain Sanskrit texts. Attention may be drawn to the 39 million papers preserved in the Maharashtra Daptar waiting for curious minds and inquisitive eyes.

More serious efforts are needed to bring to light treasures of Mss hidden in the remote corners of the country, to preserve and to study them carefully.

What follows is a statistical table showing the number of Mss in Marathi in different collections. This table is not exhaustive because information of collections from a few places has not been made available so far.

	Name of the Catalogue	No. of Mss in Marathi	No. of printed Mss
1.	Descriptive Catalogue of Marathi Manuscripts and Books in the Tanjore Maharaja Serfoji's Saraswati Mahal Library, Tanjore Vol. I, R.R.B. Goswami, 1929 Vol. II, R.R.B. Goswami, 1932 Vol. III, R.R.B. Goswami, 1938 Appendix Vol.C. Narayan Rao, 1963	All the Vols. together 2677	60
2.	Catalogue of the Marathi Manuscripts in the India Office Library by the Late James Fuller Blumhardt and Sadashiv Govind Kanhere, Clarendon Press, Oxford, 1950	251	
3.	A descriptive Catalogue of Manuscripts in the Moropant Collection in the Library of the University of Bombay, Vol. II, Usha Bhise, 1986	200	
4.	Maharashtriya Santa: Kavi-Kavya suci (1100-1740) by G.K. Chandorkar, Satkaryottejak Sabha, Dhule, 1915	1928 ¹	
5.	Marathi Samshodhan Mandalatil hastalikhitanchi varnanatmak namavali by S.R. Gavaskar, Marathi Samshodhan Mandal, Dadar, Bombay, 1972	472	

	Name of the Catalogue	No. of Mss in Marathi	No. of printed Mss
6.	Handlist of Marathi Manuscripts in Bhandarkar Oriental Research Institute, Pune	115	Some (no. not specified)
7.	List of unpublished Marathi Manuscripts in Prajna Pathashala, Wai	84	
8.	Ramdas & Ramdasi (Journal) Nos. 28, 29 Satkaryottejak sabha, Dhule	1875 ²	
9.	Marathwada Vidyapith Aitihasik Vastusamgrahalaya: Hastalikhit granthanci suci part-1 Aurangabad, 1988	973	
10.	Shrisamartha Vagdevata Mandir, Dhule	2286	
11.	Dasopant Samshodhan Mandal, Ambejogai	12	
12.	Balwant Vacanalaya, Aurangpura, Aurangabad	52	
13.	National Library of Scotland	1 (letter)	
14.	The John Rylands University Library, University of Manchester, England	4 papers	
15.	Cambridge University Library	2	
16.	Oriental Institute, M.S. University of Baroda, Baroda ³	220 (187 Mss are catalogued in the 2nd Vol. of. Alphabetical list of Mss in Oriental Institute, Baroda)	
17.	Vaidik Samshodhan Mandal, Pune	20	
18.	Shri Eknath Samshodhan Mandir Khadkeshwar, Aurangabad	184	
19.	Government Oriental Mss Library, Madras	444 two cat.	

The author is indebted to Mr. C.B. Pharande, Asst. Librarian, Jayakar Library and Dr. R.P. Goswami, Librarian, Library of the Centre of Advanced studies in Sanskrit, University of Pune.

REFERENCES

1. These are the titles of saints' poems recorded in different monasteries.
2. This is the number of repositories found in different Mutts.
3. The library contains one photocopy of an original palm leaf MS the name of which is Vaijanatha-Kalanidhi. The Ms is from the Sanghavi-no-pado, Patan, North Gujarat (Information received from Dr.Siddharth Y. Wakankar, Baroda)

Palm-Leaf Manuscripts in Telugu

J.V.Satyavani

Man's effort to convey his thoughts to his fellow beings resulted in the birth of language. The effort to give stability and permanence resulted in the evolution of script. At first man inscribed on stones, mud-blocks, then he switched over to metal plates and pillars. It was hard to preserve these from nature's onslaughts. If they had to be carried from one place to another it proved to be more difficult than preserving. So there was a need for a thing which could be easily carried and would be easily available. Palm-leaf served the purpose well. This thought may seem strange to-day, but it could be true in those days. The palm-leaf manuscripts contain not only poetry but also information regarding the rulers, people, their lives, culture and arts which flourished in those days. Today the palm-leaf manuscripts (preserved for centuries together) remain a treasure of cultural heritage to us.

Historical Survey

Transmission of information and knowledge was oral in early days. When it came to literature and when literary works began to be appreciated by royalty they were presented to them in the form of palm-leaf manuscripts. We can trace back to the age of Serfoji the founder of Saraswati Mahal Library, Tanjore, the collection of Telugu palm-leaf manuscripts. It continued in the period of East-India Company and flourished in the hands of Colin Mackenzie and C.P.Brown. Colin Mackenzie mainly gathered land records; historical evidences; he collected some palm-leaf manuscripts also with the help of Kavali Brothers. C.P. Brown collected many manuscripts both palm-leaf and paper with a special interest in Telugu. But before this in 1731 A.D. a christian padre, Lee-Gac collected some palm-leaf manuscripts from individuals as well as from East-India Company. The collection of palm-leaf manuscripts continues till date. Some individuals are donating their collections to the public libraries since they are unable to preserve them.

Telugu palm-leaf manuscripts are collected from all over Andhra Pradesh, some in Tamil Nadu mainly Tanjore, Madurai, Tiruvayyar and even from outside India.

Mr. Harby bought one palm-leaf manuscript from G.C. Hey in August 1883. In Mr. Harby's words: "It was Mr. Muthu Swamy's property. He was attacked by his enemies in Srilanka and was killed. Mr. Muthuswamy was in Srilanka and he was promised to be made incharge of a province for helping East-India company but before that he was killed by his enemies. At the time of attack he ran away from his place with some of his belongings. His belongings were 15 in number, one of which was a palm-leaf manuscripts. This was a Rāmāyaṇa, and the script was in Telugu". Later Mr. Harby took some body's help to make out the name and the subject. It was *Rāṅga Nātha Rāmāyaṇa* written by a king called Rāṅga Nātha. Dr. Arudra has provided this information in his essay, "Lamkalō Dorikina Rāmāyaṇam in Vyāsapīṭham".

SEASONING OF PALM-LEAVES

Palm-leaves are collected and checked that they were not too tender. They are dried in the shade. They are dipped in water mixed with cow-dung and again dried in shade. Some thing heavy is placed on the leaves to stop them from curling up.

They become golden in colour, after a few days. Later on they turn brown in colour. Usually these palm-leaves were cut into the required size and shape. Two bamboo planks of the same size were placed on each side of the manuscript and all the leaves were tied with a string.

Types

There are two types of palm-leaf manuscripts available in Telugu. They are called Karatālam and Śrītālam. Karatālam is the common one. This is available in plenty all over Andhra Pradesh, Tāmīlnadu and other places. Its breadth will be, not more than three inches. The Śrītālam. is mainly available in North Karnataka. It is generally big in size. Its width will be about the width of palm i.e. approximately 7 cms. For example, the size of one manuscript – Karatālam length is 17¾" and breadth 2 ¼". Śrītālam: length 24¾" and breadth 5¼".

Stylus

Stylus was used to write on palm-leaf manuscripts. The stylus made of iron, has a sharp end and the other end may be like a knife to cut the leaf to the required size and shape. This is a pen knife, having both a pen and a knife. Sometimes the other end of the stylus will be made like a bird or a bull or it may be made flat with some picture of God or nature.

TRANSFERRING FROM PALM-LEAF TO PRINT

After the invention of paper and printing, preservation of the writing became easier. While preparing the press-copy, the pandits sometimes correct the verses and give foot-notes in order to know the proper reading. Some times there may be more than two palm-leaf manuscripts available for the same text and the texts do differ from one another. In such cases the better reading is selected and others are given in foot notes. Some times even words are changed to help easy pronunciation.

For example,

Instead of using the consonant 'ఱ' (r) in a cluster (conjunct consonant) used is written as 'ృ'. But in early days even in print it was shown as found in palm-leaf manuscripts. Description of nasal 'n' and 'm' was shown with an anusvara (o) preceding the nasal.

In verse forms also we find some changes. For example: the manuscript form reads.

*"iccēdē vidya, raṇamuna
joccēdēmagatanambu satkavivarulam
meccēdē nēṛpu, vāduku
vaccēdē yavaguṇambu vasumati sumati"*

But in print it reads,

*"iccunade vidya, raṇamuna
joccunade magatanambu sukavīvarulan
meccunade nēṛpu, vāduku
vaccunade kīddu summu vasudhanu sumati"*

The previous one found in manuscript is in spoken language and in print it is converted into a grammatically correct form.

If two or more texts are available and one has dialectal forms the more common form is accepted for printing.

For example,

*"akkaraku rāni yarthamu/cuttamu
mrokkina varamini vēḷpu mōharamunadā
nekkina bārani guramu
grakkuna viduvamga valayu gadarā sumati"*

One with fore-thought! should one not drop immediately (1) a relation money not helpful in crisis, that is not readily available when needed (2)

a Deity who does not grant a boon on supplication. (3) a horse that does not gallop when mounted in a strategic formation on the battle field.

*"tarimina bārani gurramu,
tarameruganirājukoluvu, tarunulayedalam
daritipu sēyu mōhamu
garagaragā viduva valayu gadarā sumati"*

It means: One with fore-thought! should not one drop, to be above board, (1) the horse which does not gallop when incited (with stirrups) (2) the service in the court of a king who cannot appreciate real quality and (3) the crush on young women.

The first thought being more universal, it is found in print.

Preservation

Even the palm-leaf manuscripts are difficult to preserve. In olden days they were hung by means of ropes near the chimneys, or kept on attics in the kitchen. Smoke can prevent manuscripts from being eaten by white-ants. The soot also helps to make the letters clear. There is another danger of the leaves becoming brittle. To avoid this, neem oil is continued to be used. A piece of cloth is dipped in neem oil and used like a brush to clean the leaves. Some times coir replaces the cloth. Later they are wrapped by a piece of cloth and kept in a safe place. "Vasa" (Sweet-flag) powder is sprinkled on them to keep insects away.

INSTITUTIONS

The oldest known institution having a collection of Telugu palm-leaf manuscripts is the Saraswathi Mahal Library, Tanjore. Vijaya Rāghava Nāyaka (1633-1673), in his work *raghunāthābhayudayamu* says:

*"Vijaya cihnamulacēvelayucunna
vijayabhavana rājavedikāsthalini"*

This Vijaya Bhavanamu is said to be the place for the poets and the learned; where the king used to keep his books and mementoes of victories. Some palm-leaf manuscripts were written by copyists for the use of royalty and were preserved in this place. This Vijaya Bhavanamu came to be later known as Saraswathi Mahal. Sahaji (1684-1712) is said to have collected nearly one lakh manuscripts containing works of ancient and contemporary poets. Even now there are some left at Tanjore Library. But Serfoji's

(1712-1728) rule is said to be the golden period of the Saraswathi Mahal. It is called now "Maharaja Serfoji's Saraswathi Mahal Library", Tanjore. This Library has 11, 611 Telugu manuscripts.

Next in order comes, the Government Oriental Manuscripts Library, Madras. It has a collection of 2150 Mss. now. According to Tirtham Sridhara Murthy, the retired Telugu pandit of this institution, there were more than seven thousand palm-leaf manuscripts, before the partition of Andhra Pradesh i.e. Oct 1953. From them more than five thousand have been transferred to Sri Venkatēswara Oriental Manuscripts Library, Tirupati. Now the latter the one has eight thousand manuscripts at Tirupati.

The other well known institutions are:

1. Oriental Manuscripts Library-Abid's Hyderabad-1.
2. Gautami Grandhalayam, Rajahmundry.
3. Āndhra Sāhitya Parishat, Kākināda.
4. Āndhra University, Waltair.
5. Osmania University, Hyderabad.
6. Telugu University, Hyderabad.
7. Andhra Pradesh Sāhitya Academy, Hyderabad.
8. Kerala University, Kerala.
9. Adyar Library, Madras (500 mss).
10. Śrāvana Belagola, Karnataka
11. Raghunātha Temple Library - in India and
12. King's Library, Paris.
13. India Office Library, London.

Listing the individuals who have collected the palm-leaf manuscripts we may have to name first Colin Mackenzie, C.P.Brown and the Kavali Brothers who have practically helped Mackenzie in his effort.

Some names from C.P.Brown's collections who helped him in acquiring the manuscripts:

Person	Place
Cimçöli Appannācāryulu	Kadapa
Ramgāreddy Samsthānam	Nossam.
Rāghavācāryulu	Pallepāḍu near Duvvūru
Gōparāju Subbayya	Vadlapūdi (Nellore)
Kondūri Cidambaram	Mogullūri, South of Chittoor
This gentleman, Cidambaram, is said to have given a cart-load of manuscripts to C.P.Brown.	
Subbārāya Śāstri	Avuku (owk)
Library of Gajjala Reddy	Kadapa
Books collections of Raja	Pumganūr
Māmidi Vemkaya School	Machilipatnam
Lamgaru Pāpayya	Cennapatnam.
Lakshmīpati. Gudipāḍu	near Duvvūru
O.Vemkaṭa Krishṇamācāryulu.	Nāgireddy Palle, (Kāmbam, (Cumbum) Uyyalavada, Cumbum.
Mamcāla Krishṇama Raju	
Krishṇamācari. Gadvāla	
D.Jagannādha Rāju.	Kakināda.
C.Vemkaṭa Rāyanimvāru.	Gūṭāla
Buccayya.	Rajahmundry.
Pimḍiprolu Lakshmaṇa Kavi.	Kuyyūru
T.Sinayya.	Rajahmundry
G.Jagannādham	Machilipatnam.
Rajā Jagannādha Rao.	Mahili, Machilipatnam.
Appanna Pamṭulu.	Nellore.
Vakīlu Maidavōlu Subbarao.	Nellore
Rompicarla Venkaṭarāmarāju.	Nagari
Mājēti Sarvesalingam.	(Gave 227 mss.).
Kōṭi Limṅanna.	Machilipatnam
Nyayāvādi Gramdhalayam	Rajahmundry.

In the 20th century many scholars collected the palm-leaf manuscripts. Some of them are:

1. Veturi Prabhākara Śāstri.
2. Seshadri Ramana Kavulu (collected mss.) from Telangana and donated them to Andhra University, Waltair, and Sahitya Parishat. Kakināda.
3. Mānavalli Rāma Krishna Kavi. (It was Rama Krishna kavi who discovered the lone copy of Nannecōḍa's *Kumāra Sambhava* and published it in the year 1911).
4. Nēdunūri Gaṃgādharam.

The contemporary collections of manuscripts are:

1. Dr.Arudra's collection. He collected some 700 mss. both in India and abroad and donated them to various libraries.
2. Dr.B.Rama Raju collected some 600 manuscripts. Among them some one hundred are in Tamil and Sanskrit. He collected them in Telamgana districts and later gave them to Oriental Library, Hyderabad, unpublished.
3. Marimṅaṇṭi Ramgācāryulu has got more than 300 manuscripts with him. He is in Kanagallu, they are unpublished.
4. Nāgalimṅga Sivayōgi of Mahaboob Nagar has got 200 unpublished palm-leaf manuscripts.
5. Nāyani Krishna Kumāri has got some manuscripts with her.
6. Taṃgirāla Subba Rao also has got some with him. Many are donating these collections to Oriental Libraries-unable to preserve them.

India Office Library, London has some manuscripts. The exact number is not known. Palm-leaf manuscripts were taken there for exhibiting them in the museum.

The king of France wished to have some works of eastern countries in his library. He asked Fr. Lee-Gac to collect some or even to buy some mss. from East-India Company and send them on to him. One Mr.Tumma was converted to Christianity in 1715. He had some palm-leaf mss. Lee-Gac thought that because these books praised Hinduism, he had no reason to be interested in them after becoming a Christian.

Father Lee-Gac approached him for the palm-leaf manuscripts. Tumma gave away the manuscripts to Lee-Gac. They were sent to France. Lee-Gac bought some mss. from East-India Company also for the king's library.

SUBJECT DESCRIPTION

Subject description becomes necessary to make it easier for the reader. It saves time of a researcher. The description according to the Government Oriental Manuscripts Library, Madras is as follows:

- Volume I Itihāsa, Purāṇa and Māhātmyās.
These speak about Mythology and Hinduism. Itihasas and Purāṇās are mere transcriptions from Sanskritic works. The Māhātmyās deal with Kṣētra (sacred spots) nadi (river) Daivam (Deity) Māsa (month) Tithi (lunar phase) parvata (hill).
- Volume II It has two parts. Both deal with Sṛṅgāra Prabandhas. Prabandha is a unique genre in Telugu Literature. A Prabandha deals with a thin story line. The eighteen types of descriptions Aṣṭādasa (18) must find a place. Amgi rasa should be Sṛṅgāra. Amgarasa may be either Vira or Sāmta.
Such works are plenty in Telugu starting from Nannecōḍa's Kumāra Sambhavam. In the Southern School there are many Sṛṅgāra Prabandhas.
- Volume III -do-
- Volume IV Dvipada Kāvya. Kāvya written in a verse form called Dvipada which is a form of Dēśīchamdam.
- Volume V. Vyākaraṇam (Grammar)
Chamḍassu - (prosody)
Nighaṁṭuvu - (Dictionaries)
- Volume VI. Vacana Kāvya. Kāvya written in prose. Gadya, Birudugadya, Vacanam, Cūrnika utkalika prāya are the five types of vacana.
- Volume VII Satakas
This is another unique genre. Usually 108 verses written with a makuta are called Śataks. Makuta is usually the last word or phrase of the verse. This makuta bears either the author's name or the name of his Iṣṭadaivam (personal deity).

Volume VIII Yaksagāna and Damdaka.

In these two genres the Yaksagāna literature is bulky with more than five hundred texts available in Telugu. Kannada has only a few of these and Tamil has only six. They are operas with music and dance. Damdaks a praise of a God or Goddess

Volume IX Vēdāntam-Philosophy**Volume X Astrology & Mathematics.****Volume XI Medicine.****Volume XII Music.****Volume XIII History.**

The Serfoji Maharaja Saraswathi Mahal Library has two volumes of descriptive catalogue which describe in the following way:

Volume I.

- | | | | |
|----|---------------------|---|--|
| 1. | (a). Padyakāvyas | — | Kāvyas written in verse forms 1-292. |
| | (b). Dvipada Kāvyas | — | Kāvyas written in Dvipada, a metre already mentioned. 293-373. |
| 2. | Śatakas. | — | 374-421. |
| 3. | Damdakās | — | 422 to 426 |
| 4. | Gānas (Kīrtanas) | — | 427 to 498 |
| 5. | Yaksagāna | — | 473 to 498 |
| 6. | Nāṭaka (Dramas) | — | 499 to 674 |
| 7. | Vacana Kāvyas | — | 675 to 689 |
| 8. | Śāstra Literature. | — | 690 to 780 |
| 9. | Miscellaneous | — | 781 to 816. |

Volume II It is divided into three main categories They are:

1. Kāvya Vāñjmayamu.
2. Śāstra Vāñjmayamu
3. Prakīrnamu

I. Kāvya Vāñjayamu - 817-857

1. Prabam̐dha
2. Dvipada
3. Sataka
4. Yakṣagāna
5. Stōtra.
6. Pada and Kirtana

II. Sastra Vāñjmayamu (Scientific works) 858-1041.

- | | |
|-------------------|----------------------|
| 1. Chamdamu. | — Prosody |
| 2. Nigham̐tuvu. | — Lexicon |
| 3. Jyōtiṣamu. | — Astrology |
| 4. Vēdāntamu. | — Philosophy |
| 5. Saṃgītam̐. | — Music |
| 6. Nāṭyam̐. | — Dance |
| 7. Vaidyam̐. | — Medicine |
| 8. Paṣu Vaidyam̐. | — Veterinary Science |

III. Prakīrṇamu

Miscellaneous 1042

Many of Telugu works during the time of Maharatta Raja's were written in Grantha, Dēvanāgarī and Maratha Modi Scripts. In the previous catalogue particulars of such works are not given. In the present catalogue every palm-leaf containing those scripts was carefully scrutinized, thoroughly examined and incorporated.

The editor has given Telugu verses which are found in Sanskrit manuscripts also.*

Dr. B.Rama Raju has some manuscripts of Tamil and Sanskrit written in Telugu Script.

* From the introduction to the descriptive catalogue of Saraswathi Mahal Library Volume II by N.Venkata Rao, Retd. H.O.D. of Telugu University of Madras.

Approximately 1/3 of the manuscripts are unpublished. As already given in this paper.

1. Dr. B.Ramu Raju has got 600 unpublished manuscripts.
2. Nāyani Krishnakumari.
3. Tamgirāla Subbārao.
4. Maringanti, Rangācāryulu, has got 300 unpublished manuscripts
5. Nāgalimṅga Sivayōgi has got 200 unpublished manuscripts.

Apart from the above some unpublished manuscripts and their authors are as follows:

- | | |
|---------------------------------|----------------------------|
| 1. Hariscandra Katha | — Camdramauli |
| 2. Hariscandra Katha | — Dēvarājabhaṭṭu |
| 3. Hariscandrōpākhyānamu | — Virasarabhakavi. |
| 4. Saṁkara Dāsaiyya Caritra. | — Pōlisetti Linganna |
| 5. Vīrasaṁgamaiyya Dēva Caritra | — Pōlisetti Linganna |
| 6. Indumatiparināyamu | — Rāmabhadruḍu |
| 7. Ānaṁḍa Kānana Māhātyamu. | — Liṁgaṅguṇṭa Rāmāyya |
| 8. Caturvātikāmāhātmyamu. | — Liṁgaṅguṇṭa Rāmāyya. |
| 9. Pañca Cāmarālu. | — Nāmayōgi. |
| 10. Tatva Camdrodayamu. | — Mummaḍimallana |
| 11. Bhagavatgīta. | — Kaṁbhampāṭi Nārappa. |
| 12. Brahma Vidya Sudhārṇavam. | — Paramānaṁḍa Tīrthulu. |
| 13. Bāla Bhāgavatamu. | — Kōnēru Nāthuḍu. |
| 14. Mārkaṁḍēya Purāṇamu | — Ellākara Naraṣimha Kavi. |
| 15. Bhārata Sāvitrī. | — Ellakara Narasimha Kavi. |
| 16. Vāmana Purāṇam. | — Ōbala Kavi. |
| 17. Mārkaṁḍēya Purāṇam | — Ōbala Kavi |
| 18. Ādhyātma Rāmāyaṇam. | — Jagadēvarāyalu. |
| 19. Mācha Māhtmyamu. | — Oddepūdi Peddayya. |

20. Sēṣadharmālu	— Tāmarapalli Timmayya.,
21. Sāmbopākhyānamu.	— Mōcarla Nannaya
22. Udayanōdayam	— Nārannagāri Sūranna
23. Vanamālī Vilāsam.	— Nārannagāri Sūranna
24. Laksmī Vilāsamu.	— Rāyasam Venkātācala Kavi
27. Subhadrākalyāṇamu.	— Tallapāka Timmakka
28. Ganita Dīpika.	— Baddevīti Dattappa
29. Saivāgama Sikhāmaṇi	— Nēppalle Appanna
30. Bhaḷlāna Caritra.	— Mallavarpu Vīreśvaruḍu
31. Rājanīti Ratnākaramu.	— Nēbati Kṛṣṇa Mamtri
32. Kalādhārōpākhyānamu.	— Muḍiyam Venkātaramaṇa Kavi.
33. Vivēka Simḍhuvu.	— Vegināṭi Kodanna.
34. Śrī Raṅga Mahātmyamu.	— Mukumdayōgi
35. Bhāratam.	— Timmana, Ātukūri
36. Rāghava Saramu/ Yādava Pāṇḍaviyam.	— Elakūci Bāla Saraswati
37. Bhāgavata Sāramu.	— Timmayya.
38. Naisadha Pārijātīyamu	— Kṛṣṇādhvari.
39. Śiva Rahasya Khamḍamu	— Kōdūri Venkātācalam
40. Śēṣadharmālu	— Viśvanāthudu
41. Bhīmasēna Vijayamu.	— Ēnugupeda Lakṣmaṇa Kavi.
42. Sivarātrīmāhatyam.	— Lōkērāvu Sōmana.
43. Lakṣaṇa Kalyāṇam	— Vānapāla Nārana
44. Cārucamḍrōdayamu	— Cennama Raju
45. Śṛṅgārādāmu.	— Dīvi Ramaṇayya
46. Draupadi Kalyāṇamu.	— Bōruvelli Kavulu.
47. Rāmakṛṣṇa Vilasamu	— Śēṣabhattaru Appalācāri

48. Ratīmanmadha Vilāsamu	- do -
49. Jīvanmukti Prakaraṇam.	- do -
50. Nārada Brahmaśamvādam	— Lingamūrti
51. Sāṃkhya Yōgam	- do -
52. Tāraka Yōgamu.	- do -
53. Brahmāmḍavacanam	— Mācanna.
54. Paramayōgī Vilāsam	— Pāmi Nāyakudu.
55. Satya Bhāmā Vijayam	— Gaṭṭu Śeṣayya.
56. Abhiśikta Rāghavam.	— Nāḍimimṭi Vemkaṭapati
57. Citra Kavitva Darpaṇam	— Rāvukomḍala Rāyudu
58. Cikka Dēva Rāyala Vilāsam	— Śukayōgi.
59. Virabhūpaliyam	— Patron Virarāju.
60. Kaśi Mahimārtha Darpaṇam	— Namjarāju.
61. Sri Raṃga Māhātmyamu/ Māghamāhātmyamu.	— Vijayaraṃga Cokkanāthudu
62. Bhānumadvijāyamu	— Velagapūdi Kṛṣṇayya
63. Kṛṣṇa vilāsamu	— Viśvēśvarayya.
64. Sudamṭākalyāṇamu.	— Velidaṃḍla Aḷagiri.
65. Kṛṣṇārjuna Śamvādamu	— Kaṣṭūri Rāṃgayya
66. Sakala Lakṣāṇa sārasaṃgrahamu	— Gōpāla Rāju
67. Sōmavāra Vratamāhātmyamu.	— Tummalapalli Nagabhusaṇam
68. Lakṣana Sāraṃ	— Bāla Bhāskarayya
69. Viṣṇu Bhakti Sudhākaram	— Pūsapāti Vijaya Rāma Rāju
70. Jyōtiṣa Ratnākaramu	— Carigomḍa Honnayya.
71. Jambu Kēśvara Mahima	— Kavidhāti Bāla Bhadrayya
72. Mukti Cimtāmaṇi	— Yati Rāja Vemkaṭacāryulu.
73. Jagannādha Māhātmyamu	— Sūrayya.

74.	Nimbajāmahātmyamu	—	Badāgalanaṭi Narasayya
75.	Śrī Raṃga Māhātmyamu	—	Cekūru Siddhayya.
76.	Hālāsyā Māhātmyamu.	—	Śrīpati Ramabhadrayya.
77.	Cokkanātha Caritra	—	Tiru Vemgaḷayya
78.	Ṣaṇmukha Sahasraṃ	—	Śinayya
79.	Gōpīnātha Rāmāyaṇamu	—	Pāpakavi
80.	Kālimḍi Kalyāṇamu.	—	Pāpakavi.
81.	Yathā Vālmiki Rāmāyaṇamu	—	Ghanagiri Rāmāyā.
82.	Rāmāyaṇam	—	Ekōjī.
83.	Nṛsimha Purāṇamu.	—	Dharmayāmātyuḍu
84.	Bhārgava Purāṇamu	—	Dharmayāmātyuḍu
85.	Śūdra Dharmōtpala Dyōtini	—	Śeṣabhāṭṭaru
86.	Smṛti Kaumudi.		Simgarācāryulu.
87.	Draupadī Kalyāṇamu.	—	Bōyinipalli Kūmara Vemkata Rāyalu.
88.	Śeṣadharmamulu	—	Turumilla Rāmāna.
89.	Dharma Rājāśvamēdhamu.	—	Ingamḍla Kṛṣṇa Pradhāni
90.	Bhagavadgitārdtha Darpanamu	—	Pudūri Kṛṣṇayāmātyuḍu
91.	Kausaleya Caritramu.	—	Layagrāhi Garudācala Kavi
92.	Divya Dēsa Māhātmya Dipikā	—	Mustipalli Vemkabhupāludu
93.	Jagannatakamu	—	Eduṭla Śeṣācalaḍu.
94.	Sakaladharma Sāramu	—	Trilokabhēdi
95.	Cenna Basava Purāṇamu	—	- do -
96.	Akhamḍa Gnana Manali	—	Gōpaṭi Limḡakavi.
97.	Prabhōdha Vacanakāvya Prabamḍhamu	—	- do -
98.	Rājanīti Ratnākaramu	—	Nēbati Kṛṣṇayāmātyuḍu
99.	Pamḍitārādhyaōdāharaṇamu.	—	Pāḷkuriki Sōmanāthudu.

- | | |
|---------------------------------|------------------------------|
| 100. Gauri Vilasamu. | — Vēmula Rāmabhattu. |
| 101. Saṃvaraṇa Caritramu. | — Kumdāvajhala Gōpālasūri |
| 102. Divya Dēsa Māhātmya Dipika | — Mustipalli Vemkabhupāluḍu. |
| 103. Jaganāṭakamu | — Eḍutla Śēsācaluḍu. |

The Unpublished Śatakas:

- | | |
|--|-----------------------------------|
| 1. Kālahasti Liṅgaśatakamu | — Śrīgiri Virūpaksayya. |
| 2. Ēkaprāsa Śatakamu | — Uḍumūḍi Sūraparāju |
| 3. Imḍumati Śatakamu | — - do - |
| 4. Balagōpala Śatakamu | — Uḍumūḍi Sūraparāju |
| 5. Namḍa Namḍana Śatakamu | — Uḍumūḍi Sūraparāju |
| 6. Jagannāyaka Śatakamu | — Simhādri Amkana |
| 7. Coda Liṅgamā Śatakamu | — Gadde Rāma Liṅgayya |
| 8. Nāgēndra Liṅga Śatakamu | — Pulivarru Rajayya. |
| 9. Goviṇḍa Ātmārāma Śatakamu | — Liṅgamūrti. |
| 10. Idula Vāyi Rāma Śatakamu | - do - |
| 11. Parāsurāma Śatakamu | Ramamurti |
| 12. Mahītanayā Śatakamu | - do - |
| 13. Subbarāya Śatakamu | — Pottapi Venkayya. |
| 14. Yallamanāyaka Śatakamu | — Kotra Vemkateswaruḍu |
| 15. Sīsa Śatakamu | — Cennāpregaḍa Nāgarāju |
| 17. Bālacakravēmabhavyanāma
Śatakamu. | - do - |
| 18. Vedamṭa Śatakamu | — Parasurāmapamṭula
Liṅgamūrti |
| 19. Nutenimidi Divya Tirupatula
Subbaraya Śatakamu. | — Pottapi Vemkaṭāmatyūḍu |
| 20. Bārigādpula Nṛsiṃha
Śatakamu | — Eḍutla Śēsācaluḍu |

INCOMPLETE/NOT IN GOOD CONDITION

- | | |
|-------------------------------|-------------------------------|
| 1. Brhannārāḍīyamu. | — Vāsirāju Rāmāyya. |
| 2. Kāvya Sāra Varṇanamū. | — Rāmāpragada Pedapāṭijaggana |
| 3. Śikhamaṇi Parināyamu | — Gūlikllu Vemkātā Ramana |
| 4. Bhinna Prakīrṇa Gaṇitālu | — Eḷagamṭi Peddana. |
| 5. Lakṣaṇa Vilāsamu | — Penumarti Vemkatācāryudu |
| 6. Camḍrikāparināyamu | — Elakūci Bālasarasvati |
| 7. Dvipada Bhāgavatamu. | — Tēkumalla Rāmāśāyī |
| 8. Tulāmahātmyamu. | — Ēnugu Pedalakṣaṇa Kavi |
| 9. Kirātārjunīyamu. | — Dittakavi Vemkātā Kavi |
| 10. Yājñavalkya Caritra. | — Callā Guravayya. |
| 11. Vajrābhyudayamu. | — Kōsa Nārāyaṇa |
| 12. Hālāsyā Caritra. | — Namjarāju D 215 |
| 13. Nārāya Bhōjanuti Śatakamu | — Pottapi Vemkatēśvarudu |
| 15. Gajāraṇya Samhita. | — Kavindhāti Bāla Bhadrāyya |
| 16. Kumudvatī Kalyāṇamu. | — Matlakumāra Anamtarāja. |

Folklore:

- | | |
|------------------|--------------------------|
| 1. Māta Purāṇamu | — Baḍabāgni Rāmcamḍrudu. |
| 2. Īdemma katna. | — Kasakadamḍi Gopālu |

These two works are written in Dvipada form and were found by Nayani Kṛṣṇa Kumāri.

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|-------------------|--|
| 3. Māmdhāta Katha | — Author not known; information given by Dr.T.Donappa. |
|-------------------|--|

Yakṣagāna:

- | | |
|-----------------------------|----------------------|
| 1. Gaṃgāgaurivilāsamu | — Pedakempa Rāyudu |
| 2. Bālapāpamma Yakshagānamu | — Bālapāpamma D 1834 |

- | | | |
|-----|----------------------------------|--------------------------------------|
| 3. | Cikkadēvarāyala Vilāsamu | — Śukayōgi D 1880. |
| 4. | Śamta Kalyānamu. | |
| 5. | Sita Kalyānamu. | — Sahāji. |
| 6. | Kṛṣṇa Līla Vilāsamu | — Sahāji D-50d-506. |
| 7. | Jalakrīdalū. | — Sahāji D 521-527 |
| 8. | Rukmini Satyabhāmā
Samvādamu. | — Sahāji-D-583-'86 |
| 9. | Satipatīdāna Vilāsamu | — Sahāji D-501-504 |
| 10. | Kirāta Vilāsamu. | — Sahāji-D-513-518 |
| 11. | Gaṁgāpārvati Samvādamu | — Sahāji-D-513-518 |
| 12. | Tyāgavinōda Citra
Prabandham | — Sahāji-D-543-53. |
| 13. | Pārvatīkalyānamu. | — Sahāji-D-543-53. |
| 14. | Bhaktavatsala Līlā Vilāsamu | — Sahāji - D - 543-832 |
| 15. | Vallī Kalyānamu. | — Sahāji-D-590-96 |
| 16. | Vighnēśvara Kalyānamu. | — Sahāji-D-510-16 |
| 17. | Tyāgēśapadālu. | — Sahāji-D-470-852-53 D 431-33. |
| 18. | Rāgamēla vivēkamū. | — Sahāji D-931 |
| 19. | Sāraṁgadhara Caritra. | — Sarvagña Padma Nāyaka
Bhūpāludu |
| 20. | Srī Rukminī Kuruvamji. | — Attāmu Rāmānujāryudu |

Some of these unpublished manuscripts are in good condition and are complete. Some are incomplete and not in good condition. At least the manuscripts which are in good condition should be critically edited by pandits and published. If no one takes care of these, after some time we may lose these mss. They should be preserved well and taken care of.

In preparing a critical edition or a variorum edition of any text, the various mss. collected play a vital part. The oldest of the manuscripts and its history is very important. It becomes the vulgate copy for the task (the vulgate is the Latin version of the Bible, made in the 4th century.) Then all other versions are collected and the differences between them are noted.

The most appropriate readings are incorporated into the main body of the text. Other readings are given under footnotes each of the source texts being designated with a symbol.

For example,

“dīnaṃgalayaṃga nērani - I
vīnaṃ galayaṃganerani - II 2-182.”

This is taken from **Varāhapurāṇamu** by Haribhaṭṭa. The first text is in a singular form, the second is in plural form. It speaks about a king who is not amenable to sāma or dāna, such has to be dealt with bhēda. Sāma, dāna and bhēda are mentioned here. The pronoun should be only in plural form. So the second text is selected for print. (One can be made amenable in four ways according to Indian polity. They are sāma (pursuation) dāna (by gifts) bhēda (by driving a wedge and by causing a rift between people) and daṇḍam (punishment).

For Vemana's verses we find many texts. One text reads.

“ūru koṃḍa viḍu uniki paṃca, mahāvīdhi”

It means station is komdavidu and place is 5th Main Road, Another reads;

“Ūru Koṃḍaviḍu Uniki Paścima Vīdhi”. This means that the station is Komdavidu and the place is west street. Here the second text is accepted for printing due to prosodial reasons.

Outside Andhra Pradesh

Outside Andhra Pradesh, Telugu palm-leaf manuscripts are found in Tamil Nadu, Kērala, Karnataka, Orissa, Punjab, Kashmir, London, and Paris.

In Tamilnadu there are three manuscript collections.

They are:

1. Maharaja Serfoji's Saraswati Mahal Library, Tanjore; there are 11,611 mss. available and they are preserved well. Mss. are in various subjects, and are found in Telugu, Grantha, Dēvanāgarī and Marāṭimodī scripts.

1. Gaulikā Śakuna Prabamḍhamu D-873.

The Author is Kṛṣṇayāmātya. It is in the form of a dialogue between Pārvati and Paramēśvara. It deals with different results of lizard sounds at different times of the day or night on different week days.

2. *Sāmudrikā Laksanamū* an empirical science giving the results of different marks on different parts of the body.

3. *Sahadēva Pasu Vaidyamū* 1038 by Nārāyaṇa Mantri. It deals with veterinary science. It is supposed to have been delineated by Sahadēva, the youngest brighter of Dharmarāja. He is known to have taken care of the live-stock of king Virāṭa, when he served him incognito.

4. *Hayalakṣaṇa Vilāsamū* 1039 by Manumamci Bhaṭṭu

It is a traditional science connected with horses, their types, characteristics, breeding and treatment of their diseases.

5. *Uttara Hari Vamśamū* by Nācana Sōmana D.Ct. It is published.

This is the only mss. available.

6. *Dasakumāra Caritramū* by Kētana D c-167, is published.

7. *Kumāra Sambhavamū* by Nannecōda. This is the only ms. available published in 1911.

II. Government Oriental Manuscripts Library, Madras-5.

There are 2150 mss. in various subjects in Telugu script mss. are preserved well. Important mss. are:

Khaḍgalakṣaṇa Sirōmaṇi — Navanappa.

Rāgatāla Cimtāmani — Pōlūri Govinda Kavi.

Tāladasaprāṇa Pradīpika. These three are works on traditional sciences.

Paṃcatamtra by Bhānukavi. It is published by the library.

III. **Adyar Library:** It has a collection of 500 Mss On various subjects in Telugu script. Catalogue has to be prepared. They have only a list.

IV. **Kerala University**, Kerala, has some Telugu Mss Exact number is not known.

V. **Śrāvana Belagōla**, Karnāṭaka, has some Telugu Mss but exact number is not known.

VI. **Raghunatha Temple Library** has some Telugu Mss Exact number is not known. This information was provided by a scholar at the seminar.

VII. It is known from the scholars, who attended the seminar that Telugu Mss are found in Orissa, Punjab and Kashmir also, but the exact number not known.

VIII. **King's Library, Paris:** It has been discussed earlier.

IX. **India Office Library-London:** The information is already given.

The various centres preserving the Mss collections are already discussed. Telugu University has a research programme on the palm-leaf mss. Madras Oriental Manuscripts Library and Tirupati mss. library are also carrying out some research programmes.

In preserving Mss many new methods are developed. To preserve them the following ways are practised.

1. By periodical transcription of the manuscripts on paper.
2. By getting them microfilmed.
3. By getting photostat copies of them, and
4. By mending the manuscripts according to the latest methods by the use of chiffon if need be. The first method is adopted from olden days. The 2nd and 3rd methods are costly. The problem of preserving manuscripts is not so very easy to solve.

The palm-leaf should not be allowed to become brittle and the letters must be made to become legible. Both these aims are fulfilled by applying kerosine to the palm-leaves, by means of a painting, brush. The string and planks on either side of the palm leaf manuscripts should be renewed periodically. If there are symptoms of attack by worms, they should be fumigated in fumigation box in which para-di-chlorobenzene crystals are put. This process should be repeated at periodical intervals. The palm-leaf manuscripts can also be preserved by wrapping each leaf in plastic covers but this method has not yet been perfected.

The precautionary measures are:

1. The room in which the manuscripts are kept should be fairly big with plenty of air, light and ventilation.
2. The containers of the mss., usually the racks, should be periodically dusted, preferably by vacuum cleaners and coated with chemical like isol.
3. Sufficient space must be allowed between the bundles.

4. Planks of the same size for the sides should be attached to the bundles, to prevent the breaking of the palm-leaf.
5. The shelves may be dusted by disinfectants.
6. Naphthalene bricks may be kept in the shelves.

If these methods are adopted, the mss. can be preserved well. This information is provided by Government Oriental Manuscripts Library, Madras.

Catalogues are prepared and printed in both Saraswathi Mahal Library and Government Oriental Manuscripts Library, Madras - 5. In Adayar Library a list of mss. is available but a catalogue is yet to be prepared.

An example of introduction given in a catalogue about a work.

Title	—	Brahmāṇḍa Purāṇamu
Palm-Leaf-Type	—	Karatālamu
Size	—	17¾" × 1¼"
Folios	—	143 (Both sides)

Lines 6 per page. Mode of writing fair, generally free from mistakes. Condition good. Purchased in 1914-15 from Sri C. Pattabhirama Sarma, Mylapore, Madras.

This is a material translation of a portion of the Brāhmāṇḍa Purana, by Kāvūri Yallayya, son of Venkanāmātya of Śrīvatsa Gōtra, and disciple of Tirumala Tiruveṅgalayya. The work is dedicated to Rāma. The author seems to have composed also Mitraviṃdā parinaya. The subject dealt with is Artha Pamcaka of the Sri Vaiṣṇava religion which consists of the nature and characteristics of the individual soul and the supreme soul as also of the goal to be reached by the former. The means required to be adopted for reaching the goal and the impediments in the way of reaching the goal form the 4th 5th reactions. This portion of Purāṇa is not found in the printed work. Complete in size Āsvāsās.

Beginning: Śrī vaidēhi kuca
 śāvaha kumkuma rasāṃkitāyata vakṣa
 sri vaibhavāpahasita
 prā vrtsamḍhyābhrajāla rāmanrpāla :

Va - Ani krthiśvarumḍagu Śrī Rāma Camḍrum Prasamsimci

End: Artha paṁcaka vijñamamalahrdaya
 nīkunerugaṁga jeppitinemmitōḍa
 dīninerigina vāru vijñanaghanuḷu
 vāra śrī viṣṇu padamunu jēruvāru

Colophon

“idi śrī rāmacandra caraṇāravimda makaramda rasāsṡvādana matta
 milimdayāmāna mānasa, Śrīvatsa gōtra pavitra, Vemkanāmātya putra,
 vibhudha jana vidhēya, yallaya nāmadhēya pranītam̐bu saṣṡāsṡasamu
 sampūrṇamu.”

As already mentioned palm-leaf manuscripts are a treasure to us. To preserve this treasure we must make efforts. The efforts being taken by many institutions are praiseworthy. But these institutions should have contacts with one another to enable the researchers outside their state, to get assistance. The catalogues prepared in each institution must be provided to all other institutes. Those who don't have catalogues should prepare them and provide proper information. The scholars and researchers are not allowed to see manuscripts in some institutes; this situation should be changed. The mss. should be readily available for the research scholars. If these efforts are made we can widen the study of palm-leaves and research can be carried on.

Palm-Leaf Manuscripts in Kannada

N. Geethacharya

Manuscript & Manuscriptology

Even though all handwritten books are called 'Manuscripts' only books of ancient period are called manuscripts for the purpose of this field. While classifying the ancient manuscripts all documents which are handwritten cannot be classified as books (literary works). While classifying the ancient manuscripts, inscriptions, historical documents, press copies should be excluded.

The types and variety of Manuscripts

Manuscripts are available in different forms in Karnataka. Their variety and types are manifold. The collection of these manuscripts has got special importance.

(i) Kind of Leaf Used

Palm leaves ('*Ole gari*'), Paper, '*Kadata*' (a kind of cloth) etc. are various forms which are used in the preparation of manuscripts. The method of preparation is very interesting. Manuscripts are available in different sizes. The smallest is 2" in length and ½ inch in width and the biggest is of 3 inches in width and 4 feet in length. There are different varieties and also plenty of artistically valuable manuscripts.

(ii) Kinds of writing materials

To write on the manuscripts '*Kantha*', (a metallic sharp ended stick) '*Balapa*' (like chalkpiece), brush, colours, ink, penstick etc., were being used. All these items were delicate and inartistic. All manuscripts were tied with the help of two wooden planks having two holes of equal size (at both ends). Some of these wooded planks were of artistic variety. So many beautifully coloured art works are there.

(iii) Kinds of scripts

In Karnataka, Kannada is the prominent language and script. But from ancient times manuscripts were written in various languages and

scripts like Sanskrit, Telugu, and Tamil. Due to various reasons these languages are coexistent in Karnataka.

Manuscripts of Kannada language and Kannada scripts are available in plenty. Sanskrit Language and Sanskrit script (Nagari or Nandinagari) Mss are also available. Manuscripts of

Kannada Scripts	Telugu Language
Kannada Scripts	Tamil Language
Telugu Scripts	Kannada Language
Telugu Scripts	Telugu Language
Tamil Scripts	Kannada Language
Tamil Scripts	Tamil Language
Kannada Scripts	Prakrit Language

are available in small numbers. Apart from this some peculiar scripts of 'Mōḍi', 'Thigālri', 'Grantha', 'Arava' and 'Maṇipravāla' manuscripts are also available in sufficient numbers.

(iv) Variety in subject

In respect of subject matter there is variety. Even though the literary subjects are in plenty, subjects like Music, Medicine, Ayurveda, Religion, Astrology, Manthras, Arithmetic, Geography, Astronomy, Education, History, Lexicon, are the other subjects on which manuscripts are available.

Collection of Manuscripts

Since ancient times the collection of manuscripts, copying and studying have been carried out. Ancient educational centres and temples and mutts were engaged in the work. The manuscripts in subjects like Medicine, Astrology, and 'Manthra' are in large numbers. The creation of literary works, their reading, their copying and hearing etc. have been part and parcel of the interest evinced by them or the faith that one had in such things. Works which do not come under this category are very small in number.

Religious and day to day necessity apart, the collection, preservation or copying of literary works from internal consideration did not take place

in Karnataka. People did not take any interest or trouble in this regard. But after Col. Mackenzie engaged himself in this work and western scholars began to publish literary works in Kannada, such an interest arose. The work of collection and publication of ancient manuscripts on a war-footing was made possible.

Government organisations, universities and associations and persons interested in such work entered this field and collected a large number of manuscripts. In Karnataka more than a lakh of manuscripts have been collected till now.

In spite of this, it must be admitted that the work of collection of manuscripts has not been done in full measure. There are many impediments in the way. The common man does not possess proper knowledge of the manuscripts. Organisations and associations concerned have not given proper publicity to their work. There is lack of proper field work. Necessary expert personnel and resources are not available. Above all, superstitions of the people in general about the manuscripts are also there. A large number of manuscripts, have either still been hidden or destroyed.

The list of important institutions and organisations engaged in the work of collection, protection and publication of Kannada manuscripts is given below:

Sl No.	Institution	Name	Year of Establish- ment	Existing/ extinct	No. of Manuscripts collected	Catalogues	Publications/ works
1	2	3	4	5	6	7	8
I	Government	a) Oriental Research Institute, Mysore.	1884	✓	20,708 (only for Sanskrit)	8	75
		b) Kannada Research Institute, Dharwar.	1938	×	3,000	13	10
		c) Sanskrit Pathashala Palace, Mysore and Melkote.	1876 1970	✓	3,000 2,500	2	— —
		d) Oriental Manuscript Library, Madras.	1858	✓	2,000 1,405 1,540	12	25
II	Universities	1) Mysore University, Institute of Kannada studies, Mysore.	1966	✓	5,000	5+1	125
		2) Karnataka University, Institute of Kannada studies, Dharwar.	1962	✓	8,000	10	30

Sl No.	Institution	Name	Year of Establishment	Existing/ extinct	No. of Manuscripts collected	Catalogues	Publications/ works
1	2	3	4	5	6	7	8
	3)	Bangalore University, Centre of Kannada Studies, Bangalore.	1971	✓	1,753	1	5
	3a)	Kannada University, Hampi.	1990	✓	500	—	—
	4)	Mangalore University Department of Kannada, Mangalore.	1982	✓	300		1
	5)	Gulbarga University, Kannada Department, Gulbarga.	1985	✓	1735		1
	6)	Osmania University, Department of Kannada, Hyderabad.	1980	✓	150	1	1

Sl No.	Institution	Name	Year of Establishment	Existing-extinct	No. of Manuscripts collected	Catalogues	Publications/works
1	2	3	4	5	6	7	8
III	Voluntary service organisations.	1) Kannada Sahitya Parishat, Bangalore.	1975	✓	500		5
		2) B.M. Sri Smaraka Prathishtana, Bangalore.	1979	✓	1000	1	10
		3) Keladi Museum, Keladi.	1960	✓	1600	1	3
		4) Sri Manjunatheswara Cultural Research Institute, Dharmasthala.	1988	✓	3000	—	—
		5) The Sanskrit Research Academy, Melkote.	1977	✓	8000 (75 Kan.)	—	—
		6) Shivanubhava, Journal (Shivayoga Mandira, Bijapur.)	1926	×	1000	—	80

Sl No.	Institution	Name	Year of Establishment	Existing-extinct	No. of Manuscripts collected	Catalogues	Publications/works
1	2	3	4	5	6	7	8
		7) Karnataka Kavya Kala Nidhi' Bangalore.	1899	X	500		80
IV.	Religious Muts	a) Murugharajendra Mutt, Chitradurga.	1800		4661	1	1
		b) Taralabalu Mutt, Sirigere.	1800		200	—	—
		c) Sravanabelagola Jain Mutt, Sravanabelagola.	1800		470	1	1
		d) Jain Mutt, Ujire	1800				
		e) Jain Mutt of Mudabidare	1800		3000	1	—
		f) Jain Mutt Swadi and Karkala	1800			,	
		g) Jain Mutt, Hombucha.	1800				
		h) Jain Mutt, Saligrama.	1800			,	
		i) Jain Mutt, Mandya.			500		
		j) Thontadarya Mutt, Gadag.			1141	1	—

Sl No.	Institution	Name	Year of Establish- ment	Existing/ extinct	No. of Manuscripts collected	Catalogues	Publications/ works
1	2	3	4	5	6	7	8
		k) Moorusaavira Mattha, Hubli.			390	1	—
	1)	Jagadguru Kottooru Swami Mattha, Bellary.	1958		250	2	—
V. Individuals	1)	Dr. K.T. Pandurangi, Bangalore.				—	2
	2)	Sri N. Basavaradhya, Bangalore.					25
	3)	Prof. C. Mahadevappa, Bangalore.			5000	1	2
	4)	M.S. Basava Rajaiah, Tipatur				1	—
	5)	Sri S. Shivanna, Bangalore.				1	10
	6)	P.M. GiriRajaiah, Mysore.					
	7.	Dr. Nanjunda Swamy, Tumkur.					

Sl No.	Institution	Name	Year of Establishment	Existing- extinct	No. of Manuscripts collected	Catalogues	Publications/ works
1	2	3	4	5	6	7	8
		8. Others (hundreds of Scholars are Engaged)					500
IV.	Outside Institutions and Organisations.	a) Devakumar, Oriental Institute, Arrah (Bihar).			500	1	—
		b) Jain Mutt, Kolhapur.			1000	2	—
		c) Jain Mutt, Bahubali Ashram (Maharashtra).			37	1	—
		d) Jain Mutt, Hyderabad.					
		e) Bhandarkar Research Institute, Poona.			1324		
		f) Jain Mutt, Warangal.		80	1	1	
		g) National Library, London.					

Preservation of Manuscripts

The most urgent and essential work is the protection of manuscripts. The preservation of manuscripts which have been collected is a very responsible work. They have to be protected from worms and insects, from dust and from fungus.

In olden days they used to keep the manuscripts secure covering them in red cloth and keeping them in wooden boxes which could not be easily attacked by worms and insects. In the Malnad regions they used to keep those boxes containing the manuscripts in the dark chamber, above the fire place (hearth) in order to avoid dampness and fungus. It is believed that red cloth and wooden boxes keep away worms and insects.

In modern days many methods are adopted for preservation of manuscripts. The work of keeping the manuscripts away from dust is a continuous work. It will not be possible for all institutions to arrange rooms which could protect the manuscripts from dust. It depends upon the financial resources that an organisation has at its command. Air-conditioned rooms are a very essential and useful mode of preservation of manuscripts.

Likewise, some institutions are adopted the method of smearing a kind of oil prepared out of herbs and plants. This insecticide is prepared out of natural plants and herbs. Of late a kind of oil by name 'Citranol Oil' is being made use of for this purpose. This is a very useful method as the oil dries up very quickly and the smell of the perfume lasts for a longer time. This is widely used by institutions now-a-days. This method is also safe from the point of view of those who are engaged in the work of oiling the manuscripts.

Fumigation chamber is another kind of modern method of preservation of manuscripts. The box has the appearance of an almirah. The manuscripts are spread over the shelves. Below the shelves are kept the chemicals like 'theymol' 'ethoxide' etc. which by themselves evaporate and the fumes of these chemicals spread over among the palm-leaves and thereby destroy the worms. Palm leaf or paper manuscripts are collected by institutions and organisation before they are added to the stock of manuscripts. This method of fumigation should be done every year.

Lamination is another method of preservation of manuscripts, which has been introduced very recently. Modern machines which laminate the palm leaves on both sides at the same time are being used for this purpose. Lamination is one of the best devices and the easiest way of keeping safe

the torn palm leaves and lost pages of paper manuscripts. In the same manner cellotape, tissue paper are also used as a method of setting right the torn pages of palm leaves and paper manuscripts.

With the exception of a few institutions in Karnataka this kind of arrangement of the manuscripts is not made. The reasons for this are the lack of resources and well-trained personnel.

The System of Copying

There are records which show that the system of copying manuscripts was in vogue. Palm leaves were first of all got ready by cutting them to the required size and shape and softening them and also making one or two holes in each leaf so that they could be tied with threads to keep them intact. When the palm leaves were ready they used to be kept in tact by using two plain wooden planks of the same size on each side of the palm leaf manuscripts. The writers used to keep the leaves in a particular style either on their laps or on a wooden stand and carve the letters by means of an iron instrument 'Kaṇṭha'. Afterwards they used to smear coal and read the leaves. There are many records and inscriptions that show in detail the method in which they wrote over the palm leaves.

There are two kinds of scripts, namely the original script and the copied scripts. The original script is one that is prepared by the (author) poet himself (under his signature). Though such original scripts are not available in a large number in Kannada, certain very important writings, have been collected. There is a traditional system of producing and copying of scripts in Karnataka. There was a particular class of people called 'ōlekāraru' who were engaged in the work of copying palm leaf scripts. There are many records to show that there were professional copyists. These copyists used to carry the palm-leaf scripts on oxen or on carts and move from place to place, and stay in the house of those who wanted copies of palm-leaf scripts of their choice. They used to collect food grains in return and make a living out of it. Such a class of professional copying scribes are completely out of existence now. They have taken to other jobs according to changing times and circumstances.

There was a rich tradition of copying system in Karnataka. People believed that the gift (*Dāna*) of books '*Grantha Dāna*' was the best and the noblest gifts (*Dāna*). During the 10th century, a noble and religious minded lady by name Attimabbe got prepared 1000 copies of '*Sānti Purāṇa*' of the great poet Ponna and distributed those copies as gift or '*Dāna*' among men who were of a religious bent of mind. As a result of this noble and

pious act she became a lady of renown, as 'Dāna Cintāmaṇi'. There are hundreds of such instances of persons who got prepared copies of great palm-leaf works for different purposes.

These copyists of palm-leaf works stand as noble examples. The greatness of the work, the care with which palm-leaf manuscripts should be preserved, the mistakes that one could have committed while copying, his prayer to correct the mistakes, an expression of humility - all these and many other ideas are noticed.

The interest and the artistic taste that these copyists display fill us with surprise. Many manuscripts that exhibit clarity, beauty and artistry have been obtained. Every manuscript so copied has become an invaluable record and exhibit and reflects the culture of Karnataka.

Letters have been inscribed so near each other but the clarity is astonishing. The size of each palm is 2 cms in width and 6 cm in length. In such a narrow space the copyist has inscribed at least 8 to 10 lines and about a hundred letters in each line. The two pages of a demmy 1/8 size find at least 8 to 10 stanzas printed. But on one side of the above sized palm-leaf alone all the ten stanzas have been inscribed or carved out.

The palm leaves are very thin and supple. But on both sides of each leaf we find the lines carved out without spoiling the leaf which is another matter to wonder at. Around the holes sufficient space is left to see that the writing is not spoilt. Margin is also left on both ends of the leaf. It appears to be highly artistic. The interest evinced by the copyist and his taste and love of religion can be observed in the fact that the holes have been tightened with metallic rings, some times made of silver. On the facing side of the two planks they used to bind the palm leaves and keep the manuscript secure. Sometimes we find ivory carvings, colourful pictures etc on them. The pictures of religious leaders, the incarnations of Gods, the circumstances under which they appeared have also been carved out or described on the facing sides of the planks and also the palm leaves of which there are many instances.

In the same manner, there is a good number of Kannada manuscripts. After the paper came into use people began to use sheets of paper instead of palm leaves. Even here the copyists did pay particular attention to the size of the sheet of paper they used. Care was taken to see that they were of the same size. The sheets were 3-4" in width and 12 -15" in length. They observed the same method for writing on them. The lines were horizontal. They used ink and pens or slender sticks for

writing on them. A number of paper manuscripts have been collected. There are also instances of use of palm leaves for writing even after the introduction of paper as a writing material.

Important Manuscripts that have been Published

The very purpose of collecting manuscripts is to publish them. The Publication of a manuscript is by no means so easy as the publication of a book to-day. Before getting it ready for publication the manuscript has to be edited. Not all the manuscripts so collected will be edited and published. Nor is any such need for their publication. A large number of manuscripts may be copies of the same work. When that book has to be taken up for publication, all the available copies of that book will be needed.

In Kannada, sufficient number of copies of the same text are available. Hundreds of manuscripts of works like *Sarvajña Vacana*, *Vacanas*, *Songs*, *Kumāravyāsa Bhārata*, *Jaimini Bhārata*, *Prabhulinga Lile*, *Shūnya Sampādane* and the like are available at various manuscript libraries. Before any particular book is selected for publication, a detailed study of these manuscripts have to be made, i.e. list of manuscripts available has to be prepared, they have to be studied comparatively and from different sources which becomes necessary. The original text of the author will be decided after taking into consideration the variations in the texts of the various sources and deciding as to which is the most ancient text and the best possible text. The different textual forms will be given separately apart from the possible original text of the poet. It becomes necessary for the editor of a text to prepare a manuscript along with the background of the text of the poet, the reasons for it, a short history of the poet, the time when it was written and a critical study of the work.

Almost all the major Kannada works have been so edited and published. The publication of these works which commenced in about 1850 has developed extensively. The achievement of Rev. F. Kittel, B.L. Rice and other Western scholars is to be remembered for ever. After these Western Scholars, many other great scholars, namely M.A. Ramanuja Iyengar, S.G. Narasimhachar, P.G. Halakatti, R. Narasimhachar, T.S. Venkannaiah, A.R. Krishna Shastry, S.S. Basavanal, Uttangi Channappa, D.L. Narasimhachar, T.N. Srikantish, M.Mariyappa Bhatt, R.C. Hiremutt and many others have striven hard in this field.

In Kannada, Textual criticism and Manuscriptology have grown and developed side by side. The growth and development of editing such works may be reckoned in 5 stages.

1. 1850 to 1900 - The period of Western Scholars.
2. 1900 to 1930 - Popular and scholarly editions.
3. 1930 to 1965 - Period of scientific editions.
4. 1965 to 1980 - Modern scholars and books written on the subjects.
5. 1980 onwards - The time of the separation of Manuscriptology from Textual criticism.

The work done during the third period is of the best quality and done on the lines of scientific, textual editing. The major important Kannada works were edited and published during this period. During the fourth period, was written *Kannada Grantha Sampādane*. (D.L.N. 1964) and later came such works as a translation of Katre's work on the subject and the publication of a book or two. As a result of this, this science of editing literary work became an important subject of study by students of literature. Many modern scholars edited and published literary works.

In 1980 the centenary of a great person who had worked hard in the field, namely P.G. Halakatti, was celebrated. As part of the celebrations scholarly papers were presented and many new works were published. The B.M. Sri Smaraka Prathishthana (B.M. Memorial Research Foundation) was an institution established as an outcome of the celebrations. Since then manuscriptology and textual criticism have become separate subjects of study. Three or four scientific works on manuscriptology have been produced. Training classes are being conducted. A number of institutions having collection and preservation of manuscripts as their objective, have sprung up.

The concept of Manuscriptology has become a means of developing textual criticism in a wider sense. The idea that only works of literary nature should be edited and published has lost its importance and now this work has been extended to other fields, such as History, Astrology, Religion and Medical Science.

There is a large number of manuscripts which are yet to be published. Even the work of collection of manuscripts has not been satisfactory. A network of well organised institutions should be established throughout Karnataka which could undertake this work. It is possible that extensive field work may enable us to collect nearly as many as 50 thousand manuscripts. It may also be possible to procure such Kannada

manuscripts which are believed to be existing but which are lying in the dark.

The Kannada Departments of the Mysore and the Karnataka Universities have undertaken the publication of manuscripts in an extensive way. Each one of these two institutions has collected, edited and published more than one hundred works. The Government of Karnataka has taken up this work and in accordance with the schemes framed by it, has also edited, published and reprinted many works. Institutions like the B.M. Sri Parathisthana have formulated various schemes and are publishing many works.

Catalogues of Manuscripts

There are about 30 institutions in Karnataka which are striving hard to collect, preserve and publish manuscripts. Out of these thirty, about 10 institutions are engaged in editing and publishing manuscripts. Barring about 5 organisations, there is no systemic work undertaken in any one of the remaining ones in this field. Keeping the collected manuscripts in a systematic way, cataloguing them, recording them in accession registers and preparing the index, these primary works are not done on proper lines. In addition to this, there is no index prepared on the large number of manuscripts which have remained with individuals. The bulk of work done in the matter of preparing index till 1970 is not being done even in the institutions that were established after 1970. There are about 80 indices or catalogues published till now. Till the year 1970, about 50 catalogues were published whereas after 1970 only about 30 such catalogues have been published.

Catalogues are of two types (1) Index type catalogues (2) Descriptive catalogues. Of these published in Kannada the number of descriptive catalogues is larger, Index type catalogues record only the name of the work, the name of the poet, (or the author) the year or time, the language in which it is written, the form and other ordinary details about manuscripts, whereas descriptive catalogue records all the details about these manuscripts. It is just like a guide. There are about 14 points of information recorded about each manuscript (1) Sl. No. of the manuscript (2) the title of the manuscript (3) the name of the poet (4) the time or period during which he lived (5) the language in which it is written (6) the script in which written, (7) the form, (8) the size of the leaves of the manuscript, its length and width (9) the number of leaves that it contains, (10) the probable number of letters in each line (11) the subject matter or

them (12) the beginning or the introduction (13) the conclusion or the end, and (14) special additional details.

The total number of manuscripts which have been included in the catalogues is only 35,000; another 65,000 works have yet to be prepared.

In Karnataka many modern techniques have been adopted for documentation of manuscripts. In the Oriental Research Institute in Mysore, a Micro-film Unit has been installed. The editing section of the department of Kannada studies of the Mysore University has got microfilmed copies of the most important Kannada works collected in the various manuscripts libraries in Karnataka, outside Karnataka, and abroad. Also it has prepared and published the catalogue of those works. In recent times possibilities of computerizing these details and recording them are in the experimental stage.

Assessment and Suggestions

On the whole, Manuscriptology has found an extensive growth during this decade. But many more things have to be accomplished in this field. What has been done in Kannada is satisfactory. The accomplishment is much more than our expectation. Manuscripts are undoubtedly our rich and invaluable treasure and form the source material for our literature, culture and history. Such invaluable records should be collected and kept safe and secure before they are completely destroyed. This is the responsibility of the present generation. The Government is totally indifferent in the matter. What has been done till now in Karnataka is on account of the active interest evinced by social and literary service organisations, private individuals and universities. It is of urgent necessity that the State and Central Governments should open Separate Departments of manuscripts.

What requires to be done towards the growth and progress of the field may be listed as follows:-

1. The establishment of separate Departments of Manuscripts, namely 'Directorate of Manuscripts' or 'Central Manuscripts Library' both by the State and Central Governments.

2. To undertake extensive field work both at the state and central levels for collection of manuscripts. To try to bring the manuscripts also under National property law and collect manuscripts through that agency and personal will, as early as possible. If possible the work of collecting

manuscripts should be undertaken in a speedy manner, on payment of reasonable amount of money.

3. Creation of laboratories to look into the matter of preservation of manuscripts in a systematic and organised way.

4. To run schools (Training courses) in an organised way to impart education and training in order to prepare competent workers and to give financial and other assistance and encouragement to institutions (like B.M. Sri Prathisthana) which are already doing their humble bit in this field (on the lines of the Archival schools run by Central Archives).

5. The Universities, the U.G.C. and Governments should institute M.Phil. studies, summer camps, and refresher courses and also extend financial assistance to private organisations.

6. To establish a Central/State level Manuscripts library in each state and to try to see that all the manuscripts that are in the charge of institutions and with individuals are secured and kept at one particular place and made available to others.

7. Preparation of catalogus catalogorum.

8. To publish unpublished works and catalogues (which are till not catalogued). To evolve a scheme and to see that this important work is completed at the earliest.

Palm-Leaf Manuscripts in Malayalam

K. Vijayan

Palm-leaf was the most popular writing material in Kerala in ancient times. Writers freely used them, and as a result a large number of works were written on them. They cover a variety of topics belonging to all departments of knowledge, creative as well as technical.

History of manuscript collections in Malayalam

The Kerala University Manuscripts Library had the unique fortune of inheriting the Palace Collection of the erstwhile kings of the principality of Travancore. It was the practice of the princely times to present original works to the ruling king, and as such a copy each of most of the original writings came to be included in the Palace Library. Apart from that the kings of Travancore as a rule were lovers of art and literature. In their earnestness they got copies of known works employing scribes. It is recorded in the history of Travancore that at the time when the king of Ampalappula was conquered the heir-apparent Kārtikatirunāl took in his possession all the manuscripts available there with the intention of adding them to the Palace Collection. The Kerala University Manuscripts Library also had the rare privilege of having the services of veterans in the field such as T. Gaṇapathy Śāstri, Sāmbaśiva Śāstri, Mahādeva Śāstri, Kerala Varma Valiyakoil Thampuran and so on. They made all efforts to procure manuscripts from private holdings. The pains taken by them can be guessed from the following incident. While on tour to Shencotta Śāmbaśiva Śāstri, sometime Curator of the Library had to witness the sorry spectacle of some loose leaves of manuscripts being driven down by the current of the river he was bathing in. With a view to examining them Śāstri and his assistant collected those leaves with great difficulty and risk. To their surprise and delight those leaves turned out to be the portions of a precious commentary on the *Sāmavedabāṣya*. As a result of the intensive drive taken by the Curators of the Manuscripts Library from time to time as many as ten thousand manuscripts could be collected in Malayalam. All the manuscripts are listed, and an Alphabetical Index is available with the Library.

When the University of Calicut was established, the Department of Malayalam had an idea of starting a manuscript section of its own. The

reason for the same was that the existing Manuscripts Library in Thiruvananthapuram did not concentrate on Malabar in the matter of its manuscript collections. The efforts in this direction proved to be fruitful since the University could collect nearly six thousand manuscripts belonging to all departments of knowledge. The merit of the collection goes to the fact that among them 2200 numbers are original works and have not come in print so far. The Library is housed in an air-conditioned room.

There is a Grantha Library in the Sanskrit College, Tripunithura in Cochin. It was under the supervision of the Maharaja and was serving the purpose of a Palace Library. Later it was taken over by the Government of Kerala. There are nearly two thousand manuscripts in Malayalam most of them being contributed by the writers of Cochin and nearby places.

Writing material

Palm-leaf or Tālapatra was the popular writing material used in Kerala in ancient times. Of the two varieties one is shorter and thicker, and is rarely used for writing. The other variety called Śrītāla is broader and more pliable, and it is on this variety that the bulk of old literature is preserved.

Treatment of palm-leaf for writing

The palm-leaf in its crude form is brittle and gray in colour. Hence it is to be processed for the purpose of writing. The practice that existed in Kerala was to cut the leaves into size, dry them, and to treat them by boiling in a mixture of milk and water with sufficient quantity of turmeric paste added to it. They were dried in shade, and two holes were provided symmetrically leaving one fourth of the whole length both sides. Two wooden planks were employed for strengthening the palm-leaves after shaping them similar to the leaf prepared for writing.

Writing instrument

Letters were inscribed on the palm-leaf with an instrument called stylus. It has a sharp iron rod at one end and a handle on the other. The handle is generally made of iron itself by thickening the rod on that part. Bell-metal is also found used for the purpose by affluent families.

Methods of preservation

Preservation has two aspects: conservation and restoration. Any action taken in housing the manuscripts in ideal surroundings or their

handling or treatment to arrest deterioration is known as conservation. Action taken to treat for the purpose of correcting any alteration an object has undergone is called restoration. Various measures for both are searched upon. A fresh palm-leaf has certain flexibility. It becomes brittle when the atmospheric conditions are very dry. The manuscript collection with the Kerala University Manuscripts Library is stored in open wooden racks in a hall constructed for the purpose. In it temperature is controlled by means of twin air-condition plants intended to function all the twenty-four hours of the day.

Flexibility of the palm-leaf is restored to a very great extent by the application of oil. In the Kerala University Manuscripts Library citronella oil and camphor oil were used for some time. It is found that the use of citronella oil as such is also not good for the health of the palm-leaf. It is a vegetable oil. When the preservative quality vanishes its vegetable remnants serve as food for pests. Hence it is to be mixed with some type of petroleum product. The course of preservation adopted here is as follows:

Turpentine	1 litre
Camphor	500 gm
Citronella Oil	250 gm
Neem oil	10 ml
Graphite Powder	4 gm

The Grantha Library at Tripunithura in Cochin follows a slightly different method. An admixture of the following is preferred there.

Turpentine	1 litre
Neem oil	10 ml
Camphor	250 gm
Graphite powder	4 gm

The difficulty with this combination is that the smell of turpentine prevails and may cause nausea to the oiling personnel.

The traditional method of preservation is to keep all the manuscripts in wooden boxes tightly closed and locked. Only on the eve of Navarātripūjā, the festival relating to the goddess Sarasvati, are some of these taken out

and dusted. This has caused damage of manuscript, the number and value of which cannot be ascertained at all.

Number of manuscripts in various collections:

The Kerala University Manuscripts Library stands in the fore as far as its collection of manuscripts is concerned. Almost all the manuscripts with the Library are catalogued. As per the latest catalogue printed in 1991 there are 8975 entries of works in manuscripts in Malayalam. Every branch of literature is represented by the collection. All the outstanding works in Malayalam are available here. It also contains hundreds of works which are not included in any other collection. It is the Malayalam commentary of Kautilya's *Arthasāstra* preserved here that enabled the illustrious Ganapathy Śāstri to bring out an exemplary edition of the original work in Sanskrit. Nārāyaṇīya not only presents the text in its pristine purity but also makes the reader understand the hidden meanings, grammatical specialities and rhetorical embellishments. Works on indigenous system of medicine are in plenty. A good number of them are specialised treatises on various branches such as *Viśa*.

The Calicut University collection of manuscripts form part of its Department of Malayalam. Owing to the efforts made by the authorities from 1981 onwards as many as 6000 works could be collected. While the Kerala University concentrated on the central and southern areas of the erstwhile State of Travancore, the Calicut University had its concentration on Malabar area. This did pave the way for unearthing a good number of original works contributed by the learned scholars of that region.

The Grantha Library at Tripunithura houses nearly 2000 works in Malayalam. It has preserved certain works written by the authors belonging to the Kochi region in addition to those current throughout the state of Kerala. The works edited and published by the Kochi Bhāṣāpariṣkaraṇa Committee have been mainly based on this collection.

In Kerala there are several ancient houses which have palm-leaf collections. Among them mention may be made of Pakaravoor Mana in Trissur District. The author of this paper has collected a good number of them for the Kerala University Manuscripts Library. Still the Mana holds many bundles which the head of the family then was reluctant to part with. The Sukrtindra Institute of Research, Cochin also holds nearly two thousand palm-leaf manuscripts.

Certain features:

The Kerala University Manuscripts Library represents almost every significant writer of ancient Malayalam. It also covers every field of human wisdom. Special mention may be made of treatises in *Mīmāṃsā*, *Nyāya* besides creative fields such as *Kāvya*, *Rūpaka*, *Campu*, *Stotra*, etc. Considerable number of technical works dealing with *Tantra*, astronomy, astrology, medicine and allied departments of knowledge are also available.

Daivāgamam *Bhāṣā* is the oldest dated manuscript in Malayalam included in the Library. It belongs to 1521 A.D. and represents a very old facet of the Malayalam language under the influence of Tamil. The work is written in Kerala palm-leaf and continues to be readable.

The Calicut University collection also contains works in *Pāṭṭu*, *Gāthā*, *Āṭṭakkathā*, *Tullal*, etc. A good number of works are translations or commentaries of Sanskrit compositions.

Publications:

The Kerala University has so far published 172 volumes from its collection in Malayalam. They include five volumes of descriptive catalogue of Malayalam manuscripts and two Alphabetical Indexes. *Arthaśāstravyākhyā*, *Anantapuravarṇana*, *Āyudhalakṣaṇa*, *Gajalakṣaṇa*, *Candrotsava*, *Jñānappāna*, *Keralotpatti*, *Tattvamasimahāvākya kattiḷa*, *Tantrasamuccaya*, *Taccusaśāstram* *Nārāyaṇīyavyākhyā*, *Manuśyālaya-candrika*, *Śeṣasamuccaya*, *Sangītacūdāmaṇi*, *Sūryasiddhāntavyākhyā*, *Sāmudrikalakṣaṇa*, etc. have won much fame. A good number of volumes are on *Āyurvēda* and *Jyōtiṣa*. A few works on *Kūṭiyāṭṭam*, *Pāṭhakam* and martial arts are also there among the printed works.

The university of Calicut has published the descriptive catalogue of the palm-leaf manuscripts in its possession. Of them the first volume is set apart for works on Malayalam literature and the second for scientific literature in Malayalam.

Even now there are hundreds of palm-leaf manuscripts remaining hidden in private collections in the state of Kerala and in its neighbourhood. In order to procure them or to get copies of them, an intensive drive is to be made in all districts of the State. Similar attempts are also to be made in the Kanyakumari District of Tamilnāṭu. This can be done only with the hearty co-operation of the University Grants Commission, the Central and State archives and other cultural institutions. This may help pooling together works which are hitherto unknown or copies of manuscripts enabling finalisation of texts after proper collation.

Palm-Leaf Manuscripts in Tamil

P. Subramaniam

Tamil has a unique place among the classical languages of the world. Almost all the world languages have their own version for speech, writing and literary work. But ancient Tamil can be classified into Tamil for prose, Tamil for Poetry and Tamil for drama (இயற்றமிழ், இசைத்தமிழ், நாடகத்தமிழ்) based on the usage. Each classified variety has its own grammar. Tamil has numerous literary works to its credit. The ancient grammatical work *Tolkāppiam* even speaks of grammar for the life of people.

Spoken Tamil in course of time had evolved its own phonetical scripts. To register the thoughts for posterity earlier Tamils used palm leaves.

1. *paimponiñōlai mītu paṇpura eḷuti* — (Villi Pāratam Cūtu pōr - 51)
2. *taccukkārarkaluku 1658 il Tancai, vicaya Rāgava Nāicker alitta pattaṇṇam “Vellittakatuḷalil” porikkappattu.... jākarttāvin poruṭkātciil irruḷḷkiratu* (History of South India p. 26)
3. *akal nālamum ullālavum ceppētu ceitu koṭuttarūḷiṇāṇ* (Thalavāipuram copper plates, para-7)
4. *kal mēl eḷuttuppōlkāṇumē* (Mūturqi -2)
5. *mutir pontōḷai mutāṇkal tirumukam* (Cilampu-8-47)
6. *ēttiṇuṇi kitaiyiṇum mūttamai kīliyiṇum* (Perunkatai-410)

The above quoted evidences suggest that gold plate, silver plate, copper plate, stone slab, Tālai leaf and cloth were used. Further mud slab, leather, poorja barks, wooden planks and bamboo splits were also used. But to register the important matters that have to be sent through messengers, to write grammar and literary works, to write books on music, maths, astrology, medicine, varma art, etc. primarily Tamils used palm leaves. The abundantly available palm leaf manuscripts prove this.

Why they chose palm leaf

In the plains of Nile river grew a variety of grass called papyrus. It was processed and used by Egyptians and some other people. Papyrus rolls were likely to be ruined in a short time. So in some countries people preferred leather as writing materials. Some other leaves, mud slabs, wooden barks were also perishable material. It was not an easy job to use the wooden planks and bamboo splits to write bigger works, and to handle the same in their daily use. Metal plates, cloth and leather were costlier writing material. To write good Ethics, killing animals and processing their hides is inhuman and repulsive. One cannot take the stone slabs as writing material to desired places easily. Further to write on them is not an easy job. It consumes a lot of time. But the palm leaves which last for one or two centuries are not costly. They are available in plenty in all the places of Tamil Nadu. Even longer works can be accommodated in fewer palm leaves which in-turn can be bundled into handy units. It is easy to take them even to distant places. Speedy writing is also possible in the case of palm leaves. For these reasons earlier Tamils chose palm leaves and used them.

Tamil kings had their own palm leaf writers, the senior among them or leader of the palm leaf writers was called *ōlai nāyakam*. These details are found in the *periya leiden* copper plates paragraph — 2, as follows:

It is a land not to be taxed, wrote the palm leaf writer "nitta vinōta vala nāttu... viḷattūr kiḷavan amutan firttakaran, ōlai nāyakam ... kṛiṣṇan Rāmanāna mummūti Cōla .. mūvēnta vēlanum oppinālum".

ottittān viṭutta ōlai utporuḷ uraimin enna

(*Cīvaka cintāmaṇi* — 2140)

*kaṇakkutturai murriya kaṭuñcolōlai
arakkup porī yorri yāṇaiyirpōkki"*

(*Peruṅkatai* 1-37, 208-209)

The word found in the above lines refers to the king's messages and orders. As they were written on palm-leaf (*ōlai*), the word *ōlai* itself acquired the meaning-king's messages and orders.

koravar tiruvukkērpak kuṛittunāl ōlai viṭṭār

(*Taṭuttāṭ*. 9)

tōkai maṇa ōlaikoṭu tūtuvar aṭaintār

(*Naiṭatam*, *Naḷan viṭu tūtu*-3)

Here in the above two literary lines the word *Ōlai* refers to letters having matrimonial message.

Varieties of palm trees

There are two varieties of palm trees. They are *kūntar paṇai* or *Tālippanai* (Sritālam) and *Nunkup paṇai*. A shorter variety of the palmate family is also being mentioned. The leaves of the trees such as palm, coconut, areca-palm, which have their woody portions on their exterior portion are mentioned by different names such as *tōtu*, *matal ilai*, *ētu*, *ital* and *pālai*.

Processing the leaves

The leaves severed from the trees were dried in the shadows not directly under the sun. If the leaves were older they were buried in the mud for one or two days and then dried in the shade. The dried leaves were cut into pieces of equal length with the central midrib and boiled in the water. The boiled leaves were once again dried.

Caṭṭamum ēṭum

The leaf piece with the midrib is called *caṭṭam*. The student who starts the writing practice would be given the *Caṭṭam* to write. The leaves used for learning were found. They were either repeatedly written in single Tamil letters or numbers. These leaves were usually *caṭṭams*. They were also used to cover the P.L. manuscripts on either side.

When the midrib was removed we could have two equal portions of the leaf. Each one was called *ētu*. The cutting of leaves into equal length and removal of the midrib was called *ōlai vārutal*. The blank leaves were called "*Vellōlai*" According to the length of the *ētu*, they were holed in one or two places and bound with a string which ran through the hole.

Patam pārttal

To know whether the *ētu* was in writing conditions, the writer would write a zero with this writing stylus (*eḷuttāni*). If the stylus got struck it was learnt that still the *ētu* had not been dried to the required level. If the stylus did not get stuck and was easy to write it was learnt, the leaf had been processed well. If the leaf was dried too much, we would hear a harsh sound while writing; sometimes the stylus would pierce the leaf, or the leaf would break into pieces. Then as per the requirement, the leaf would be soaked in water, and dried further. The practice of testing the 'ētu' has turned later, into a practice of drawing the 'pillaiyār culi' when one started writing.

The Size of the Manuscript

All the palm leaf manuscripts are either in the leaves of *Sritālam* or of *Nuṅkuppaṇai*. Among the two varieties *Nuṅkuppaṇai* manuscripts are comparatively many. The length and the width of the manuscripts would be according to the size of the available leaves. The thickness of Manuscripts bound together or the no. of leaves would be according to the size of the book. The size of the Mss. would be according to the proposed text and its shape evolves according to the taste and artistic talent of the processor.

The Size of the Manuscripts in the Govt. Oriental Manuscripts Library, Madras.

1. *karināl Vīlakkam* — D. 1998 8 × ¾ cm. 16 ēṭu — 2 Lines
2. *kanta purāṇam*. — D. 542 50 × 4 cm. 1182 pages. 10 lines per page
3. *kamparāmāyaṇam*. — D. 514 — 1492 pages.
4. *periyapurāṇam*. — D. 619 more than 1000 pages.
5. *Appar thēvāram*. — D. 1131 more than 1000 pages.

Some of the above are very small in size and some are very big. Usually most of the manuscripts are of 40 × 3 cm. size.

The manuscripts gathered from the District Collectors' Offices have leaves of full length and width. The leaves are even 85 cm. in length and 3 cm in width.

Ways of Writing

The available Tamil palm leaf manuscripts can be classified using three methods.

1. Classification of the manuscripts on the basis of writing material.
2. The way of beginning and concluding in a leaf and leaving margin on the left side of the leaf.
3. The writing style of Individual letters.

Instruments to Write

Stylus, sharp stones, *nāṇal tantu*, the feathers of birds, quills, thin brush, animal's sharp bones were used to write on the writing material. But stylus was mainly used on the palm leaves. This was also called *elutukōl* or *eluttūci*.

Types of Stylus

1. Some styluses were short, one end was sharp, and the other end was slightly heavy and round. This is called '*Kuṇṭeluttāṇi*'. Normally the beginners would use this type.
2. In some other types of stylus the sharpened nail portion would be long. Instead of the metal ball at the other end there would be a small knife. This knife could be used to cut the leaves into required length and width. This was a two in one type. This is called '*vāreḷuttāṇi*'.
3. In yet another type, the sharpened end and the knife could be folded towards the opposite side. In a folded condition it would be safe and handy. This type was called '*maṭakkeḷuttāṇi*'.

The Mysore Oriental Research Institute has a set of '*prākiruta*' Manuscripts. They were written using quills and ink. The manuscripts are still preserved. But in Tamil we have no such manuscripts.

The format adopted

Writing a Manuscript is nothing but writing a book. Usually the following pattern is adopted in all the books.

1. beginning with a prayer
2. beginning with auspicious words in the first line
3. In the introduction partly stating the name of the book
4. As and when required using sub headings
5. In the end stating the history
6. ending with a hailing passage.

This pattern is common to all manuscripts as well as books.

In some Manuscripts on the left and right sides 2 to 3 cm. space is left unwritten. In some Manuscripts on the right side there would be no space. In some of them the space on the left side also would have phrases and sub-titles. Example: *tiruccirrapalam*.

There is a definite pattern in choosing the words as follows:

Manuscripts	Phrases
1. Cankam Literature, Grammar, <i>Purāṇam</i>	tiruccirṛampalam, sivakaṭaṭcam, ponṇampalattarasē tunai, kriṣṇa Cakāyam; Sri Rāma Ceyam.
2. Medivel Literature or Cirrilakkiam	kaṇapati tunai, Saraswathi tunai, tēvi Cakāyam, Ariōm nanṛāka.
3. Medical Manuscripts	siva Kirupai unṭākavum, tēvi cakāyam, kuruvē tunai.
4. Saivite Literature	siva Cakāyam, Mīnāṭci ammai tunai, cupramaṇiar tunai, vaḷḷi nāyaki tunai unṭākavum.
5. Vaishnavite Literature	ālvār tiruvaṭikalēcarāṇam, peria vāccān pillai tiruvaṭikalē carāṇam.
6. Jain Literature	cupa mastu.
7. Christian Literature	—
8. Islamic Literature	—
9. <i>tiruppāvai</i> Manuscripts	āṇṭāl tiruvaṭikalē Carāṇam.

We cannot assume that the same syntax was found in their respective original scripts. They may be later additions by the scribes. The above mentioned syntax is found in the 1st leaf alone. Below this invoking expression, the name of the work, *atikāram*, *paṭalam*, and other themes were found usually written. Either any one of them or all were found. In the successive leaves the serial no. of the leaf would be found. As and when required the sub titles would also be written.

At the end of the Manuscript, the name of the author, the name of the work, number of the poems, what the learners would gain, would be mentioned in verse form.

The Manuscript would come to an end with a greeting and the word 'end'. Some of the manuscripts would end with their history.

Classification of the Palm Leaf Manuscripts

The palm leaf manuscripts can be classified on the basis of the subject of the manuscripts, style of language used and the nature of the manuscripts.

1. Subject of the Manuscripts

On the basis of the subject matter of the manuscripts, they can mainly be classified as dictionaries, Tamil language readers *aricuvāṭi*, Alchemy, Grammar, Literature, Maths, Religions, Magic, Astrology, Invocation, Drama, Geology, Medicine, Witchcraft, History, Varmam and Astronomy.

Besides Thesaurus-Tamil dictionaries, English-Tamil, French-Tamil dictionaries, Technical dictionaries for Astrology, and medicine were also available. Further a separate dictionary for Tiviya pirapantam is also available in the form of palm leaves.

Literary palm leaf manuscripts can broadly be classified as classic literature, minor literature and legends.

In the Tamil classical category, *akapporuḷ ilakkiyam*, *purapporuḷ ilakkiyam* and *nīti ilakkiyam* (Moralistic Literature) are well known and highly individuals. Under minor literature category there are more than thirty types. Legends, Epics, history of the temples and their greatness are included in the category.

In the case of religious Manuscripts, Christian, Islamic religious manuscripts are also available. In the case of medical manuscripts some are named after their authors. Eg. *Akattiar kurunūl*, *Ampikānantar muppu*, *Nantitēvar perunūl*. Some are named after the medicinal preparations like *Karpam*, *Carakku* and *Tailam*. Some have the names of the diseases treated. Eg. *kunma rōka cikiccai*, *Vāta rōka cikiccai*. Some manuscripts have definite names like *Kulantai vākatam*, *Makalir maruttuvam*, *Mattu Vākatam*. Some manuscripts assume common names such as *Anupava vaittiam*, *Vaittia cintāmani*. Self defensive martial art, *Varma nūls* are included in the medical books.

If the name of the manuscripts end with the words *kalvettu*, *kaipitu*, *carittiram*, *cācanam*, *vamicāvali* they can safely be classified under the historical works. *Kapparcāttiram*, *Kūvanūl*, *Cāmuttrikam*, *Cirpa Cāttiram*, *Maya nūl* are connected with various arts and crafts. They hold a significant place among the Tamil palm leaf manuscripts.

2. Style

The Manuscripts can be classified as follows on the basis of the styles used:

- | | |
|--|------------------------------|
| 1. Poetical works | 2. Prose works |
| 3. Poetry and prose works | 4. Manippiravāla style books |
| 5. Tamil works written in other scripts. | |

The explanatory works for *Nālāyira tīviya pirapantam* such as *Arāyirappati*, *Pannirāyirappati*, *Muppattārayirappati* are in *Manippiravāla* style. There are palm leaf manuscripts in which all the poems of *Nālāyira tīviya pirapantam* are written in Telugu script. Likewise some manuscripts which deal with religious matters, *Cāttiram*, philosophy are written in Grantha letters.

3. Nature

On the basis of the nature of the manuscripts they can be classified as:

1. Original Manuscripts
2. Copies of Originals
3. The Original Text of Poems alone
4. The Original text or poems with commentaries
5. The works which are incomplete
6. Manuscripts with some parts missing
7. Manuscripts with no mistakes
8. Manuscripts with lot of mistakes
9. Manuscripts which are legible to read
10. Worn-out Manuscripts.

Palm Leaf Manuscript Centres

	Places	No.	Bundles of Mss.	Works
1.	Institutions in Madras	8	15043	24012
2.	Universities	3	3746	5746
3.	Colleges	4	712	959
4.	Mutts	14	2546	4239
5.	Other Institutions	5	2126	3129
6.	Individuals	18	3510	3570
7.	Other States in India	11	10830	12130

In the above seven areas there are 63 institutions, where the palm leaf manuscripts are preserved. It is known that there are more than 38313 bundles of palm-leaf manuscripts. It is still not known as to how many individual works are in those bundles. As per the catalogue of enumeration there are 53525 works in those manuscript bundles.

As mentioned earlier manuscripts are preserved in 52 places in Tamilnadu. In these places there are 27,483 bundles of manuscripts. In those bundles there are 41,395 works. The variation of the number of bundles and works is due to the collection of many works in one bundle.

The 52 places in Tamilnadu, where only the palm-leaf manuscripts are preserved are mentioned in this essay. The 41,395 works in these 52 places alone are considered in this treatise.

The Govt. Oriental Manuscripts Library is the biggest in this country. More than 65 thousand Sanskrit manuscripts are preserved. The collection of manuscripts was done in a planned manner. A Revenue district is chosen for a year, and the message would be spread in all the villages through the district collector. Palm-leaf manuscripts were collected in the taluk head quarters. People used to hand over their manuscripts free of cost. Some were paid. On a particular date, staff from the manuscript library would go to the Taluk head quarters and receive the manuscripts. This procedure was followed till the year 1961. It was stopped in the year 1961 because of the Indo-China war. Till date the collection has not been revived. Earlier the palm-leaf manuscript library was in the hands of D.P.I. Later it was

* The catalogue is given in the annexure.

transferred to the Director of Collegiate education and then to the Director of Public Libraries and finally to the Director of Archaeology. Even though the library changed hands, no publication was done. No connected work was undertaken.

Earlier private individuals were permitted to publish the works found in the manuscripts. Now it is not easy even to examine the palm-leaf manuscripts.

Even when the enlightened individuals came forward to hand over the palm leaf manuscripts in their possession to the library, they were not accepted. They were told that there was no place in the library to store and preserve the manuscripts, and that it was not necessary to deposit them in the library.

No more manuscripts were added to the collection of U.Vē.Cā. library. There was no addition in the Adyar Library also. No one was allowed to examine the manuscript collection there and to publish the same.

Roughly 1800 manuscripts which were in the hands of the Tamilnadu Archaeology department are now in the custody of the Govt. Oriental Manuscripts Library. Later they collected nearly 150 manuscripts and they are with them now.

International Institute of Tamil Studies started on 6th October 1979 a Diploma Course on manuscriptology. Five people were trained each year and the course is being continued. Apart from the initial period no further attempt has been made to collect the palm-leaf manuscripts. In the beginning 20 books were published from the manuscripts. After that no book was published.

When the Tamil University was started they gave advertisement in daily news papers seeking palm leaf manuscripts. They even sent their staff to various places and collected manuscripts paying money. From some districts they collected documents drawn in palm-leaf manuscripts.

Kōvai pulavar Ira. Theiva Sigamani Gounder gave his collection of manuscripts to the Pērūr Sāntalinka Aṭigalār Tamil College. They are now being preserved in the college. Viruthunagar women's college management, out of their interest collected some manuscripts and after that there was no activity.

In *Ciravanapuram Kowmāra* mutt there are some palm-leaf manuscripts. They are written by Vannaccarapam Taṇṭapāni Swāmikal.

Cittāmūr mutt, *Kunta Kuntar* educational institution has some manuscripts and they belong to Jain Literature. They were collected recently.

Ampalavāṇa Tēcikar, the 3rd mutt head of *Tiruvāvatuturai Aṭṭṇam* wrote 10 books. The 4th and 5th mutt heads also wrote four books. They were collectively called *Pantāra Cāttiraṅkal*. Later mutt heads and poets wrote many philosophical works, *Talapurāṇams*, Grammatical and Literary Works and many minor writings. Many commentaries were written on famous philosophical works. All these works were preserved in the form of palm leaf manuscripts in the mutt library.

The mutt heads took pains to copy the religious texts appointing scribes and also preserved them in the mutt Library. Important manuscripts were published later. Other mutts also followed the example of *Tiruvāvatuturai* mutt, and started collecting and preserving the manuscripts by forming their own libraries. This valuable work continued since 12th century A.D. But now stagnation prevails.

Letters were sent to the above mentioned places where palm leaf manuscripts were preserved, requesting the number of manuscripts they had and for any special information available. Replies were received from one or two places. The Universities, Colleges, Libraries which run separate departments for the palm leaf manuscripts and private individuals did not show any interest.

The information collected after painstaking labour from the individuals about the manuscripts in their possession is not complete. The *Nāval pākkam* (Tiruvannāmalai Campuvarār Dist.) near Vanṭavāci, *Cattuvāccār* (Ampētkār Dist.) near Vellore, Māmpalam, Chintātripet (Madras) and in other places there are many astrological centres under the name of the 'Akastiar Nādi Cōṭṭam'. They have hundreds of palm leaf manuscripts. But they refuse to give authentic information.

In Ceñci Dist., many families have manuscript copies of *Aruṇācala purāṇam*. Before doing any good work or deciding on a marriage they refer to the palm leaves of this purāṇam. If they strike at *Tirumanac carukkam* or any verse which starts with an auspicious word then it is considered to be a good omen indicating a prosperous life. Many manuscripts were used in this way.

Formation of Libraries

In the seven categories of places mentioned earlier three are important ones. The manuscripts were collected and preserved by these institutions; separate places were allotted to preserve these manuscripts. The three places are:

1. Govt. Oriental Manuscripts library, Madras
2. U.Vē. Cāmināta Aiyar Library, Madras
3. Carasvati Makāl Library, Tancāvūr.

G.O.M.L.

Since 1782 Colin Mackenzie served initially as a surveyor and later as Surveyor General in the East India Company army. When he stayed in Madras he collected documents, palm leaf manuscripts, and coins from all over South India. In the year 1811 he got permission from Lord Minto and collected things from Iḷam and Jāva and other places in India. After the death of Mackenzie the then Governor general Hastings bought all Mackenzie's collections from his wife paying 10,000 pounds in the year 1821.

Dr. Leyden who toured India between 1803 and 1811 collected some palm leaf manuscripts. C.P. Brown, an ICS Officer, collected many manuscripts after 1837. All these were taken to London and kept in the Indian Office Library. These valuable things were brought in parts to Madras between 1844 and 1855, and kept in the Madras Educational Society. In the year 1870 they were transferred to Madras Presidency College. With all these manuscripts, Govt. Oriental Manuscripts Library was opened in January, 1939. The Library functioned in the premises of the Madras University.

Dr. U.Vē. Cāmināta Aiyar Library

Dr. U.Vē. Cāmināta Aiyar took the publication of palm leaf manuscripts as his life time task. In some cases for a single book he collected many manuscripts. All his publications and the books, he wrote and published, the manuscripts he collected, his notes, the papers which he wrote with his own hand writing for publications were preserved, and with these, a library was opened on 7.7.1943 in his name.

Tañcai Carasvati Makāl Library

The Nāik kings who ruled Tancāvūr in the 16th and 17th centuries did the needful to collect the Manuscripts in Tamil, Telugu, and Sanskrit languages. The *Marāṭṭā* kings who succeeded the Nāik kings also did the same. All the collected things were kept in Tancāvūr palace. From 1798 A.D. to 1832 A.D. Sarabōji-II ruled Tancāvūr. In the year 1820 he went to *Kāci* on a pilgrimage. On his way he collected many manuscripts. He bought many books with the help of poets and the British Officers. All these collections were deposited with the British Govt. in the year 1918 and a library was formed. It was named Sarabōji Maṇṇar Carasvati Makāl Library. Till date the Library continues to function.

Religious mutt-heads were interested in collecting the palm leaf manuscripts about their religion. The manuscripts collected by them and the manuscripts they wrote were preserved in their respective mutts. Now numerous manuscripts are being kept idle in *Tarumapura ātinam*, *Tiruppanantāl kāsi maṭam*, *Tiruvāvatuturai ātinam*, *Kāñci Kāmakōṭi pīṭam*, *Cankarācāriār mutt*, *Tontaimantala ātina mutt* and the other mutts. The books written by Vannaccarapam Tantapāṇi Swāmikaḷ are preserved in the form of palm leaf manuscripts in *Ciravanapuram Kaumāra Mutt*.

All ancient Tamil books were written on the palm leaf.

Variations in the Manuscripts

The manuscripts were copied many times, generation after generation for their use. Because of this, variations occurred in the manuscripts.

1. Memory Stage

The great scholars who had memorised the entire book taught their students without the help of manuscripts. The students wrote the entire book as and when the teachers recited the book from their memory. While recalling from memory some words or lines were substituted by different ones. Because the teachers were great scholars the substitutions were apt and the rhythm never failed.

2. Copying Stage

Some scribes with a little knowledge did the work for wages. Naturally their script writing and the poor condition of the original palm leaf manuscripts added to the variations.

Learned scholars also copied original manuscripts. They did the work to learn the work and also for their future use. While copying they substituted words and lines according to the place and continuity of the matter.

In speed-copying, while one person keeps on reciting the text and the other writes, owing to, phonetic mistakes or variations, errors and substitutes were bound to occur.

3. Accidental happenings

While copying one has to see the original manuscript. Because of the continuous perusal of two different manuscripts there are possibilities of missing or repeating some words, and lines.

When we compare Tirukkuraḷ Commentaries of Parimēl Aḷakar and Maṇakkuṭavar we can find the names of the “atikārams” changed.

Atikāram number	Parimēl Aḷakar	Maṇakkuṭavar
7	<i>Putalvaraip̄perutal</i>	<i>Makkaḷ p̄r̄u</i>
23	<i>īkai</i>	<i>īkaiyutamai</i>

We can point out many changes like this.

4. Confusion over Tamil letters

Tamil palm leaf manuscripts have four distinctive characters.

1. Old form of the letters
2. Difference in handwriting.
3. Mixing of Grantha letters
4. Combined letter system.

In the old form of letters the consonants were not given the dots on their heads. No differences were shown between E (ஏ) and O (ஔ) short and long vowel combinations with the consonants. Further the consonant combinations with long vowels were given at the end of the *tunai eluttu*. No difference was shown between the above mentioned *tunai eluttu* and labial (இடையின) ‘r’. These three characters of old style writing had given places for many mistakes.

Examples:

yārum illait tāṇē kaḷvaṇ (*Kuruntokai* — 25)

In the last word the dot is not added to the letter in the scripts. Commentators took the word as *Kaḷavan*. The word *Kaḷavan* means a person who stands as Example.

tōrrēn turralum paḷiyē (*Kuruntokai* — 32)

The word 'tōrrēn' found in this line has been published as 'tōrrēna'.

Further copy writers and publishers chose to write or publish as they liked with dot or without dot.

Cēraṇ Maṭavaṇṇam cēra naṭaiyovvāi (*Cilampu* — 7.23)

Here we are not able to differentiate between short and long letters on the one hand 'tunai eluttu and r' on the other.

Unpublished Manuscripts

All the Tamil literature works starting from *Tolkāppiyam*, *Eṭṭuttokai*, *Pattuppāṭṭu*, five epics, *Paṭiṇēṇ kīlkaṇakku* were published from manuscript sources. Further many minor Literatures, Medical books, Astrological works, Varma books, Religious works, and Religious Ceremony works, continue to be published from manuscripts.

Still there are many unpublished manuscripts. Example:

1. *Kuḷaḷavar Cuvāmi Katai*

This manuscript is in the possession of the International Institute of Tamil Studies. It has 72 leaves, each with a length and width of 45 cms and 3.5 cms. respectively. This story was well known to the people of Tirunelvēli and Kaṇṇiyā Kumari, and it was sung in the *Villuppāṭṭu* style. A single episode in the *Kamparāmāyanam* is picked and dealt with elaborately. But the author mixes the culture in narration so as to suit the tastes of the regional people.

The author assumes that the city that comes in the story as Ayōtti, to which Rāmā returns after his exile. The city is beautifully decorated. This part of the story absorbs the thought of the people. He mixes the culture and makes the people identify the story with their life.

Some time back after Rāmā came to the city, the court was called to order, Rāmā enquires about the Revenue conditions. Parataṇ replies that the farmers have cheated him. Farmers entered into agreement with

the king, "*Mēlē Kanṭatu Gopālarkkum kīlē Kanṭatu Camucārikkum*". Parata narrated first the agreement: the produce above the land is to the king, below the ground to the farmers. On that particular time the farmers produced tubers and pulps and they took all and gave the stalks and stem to the king:

*mañcal iñci cirukilanku
vaṭṭa irulli vellappūtu
cēnaiyōtu cēmpum vaittār
ciranta vallik kilankum vaittār*

Thus they cheated the king. When enquired about this they were ready to change the agreement vice versa and the agreement was changed as: "*mēlē kanṭatu camucārikkum — kīlē kanṭatu Rāmarukku*".

Next year the cereals were sown and they had them according to the agreement, explained Paratan pathetically;

*nellup payirōte kampam pullum
nērtiyāṇa kutirai vālikalum
cāmaip payirōtē varavan payir.*

On hearing Paratan, Rāmā called the farmers to his court. Each one was given 5 to 6 pumpkin seeds. He also gave the same no. of seeds to Hanuman. All of them planted the seeds. Hanuman's plants grew and yielded great pumpkin. But the farmers' plants withered. But they agreed to pay money, equal to the weight of pumpkins Hanuman paid to the throne.

All of them had to sell their belongings to pay the necessary money. The moral of the story is that the public should not cheat the king. The money acquired by cheating others could not be enjoyed.

2. *Tōttukkāri Katai*

The king Kumarapparācan wants to marry Tōttukkāri. Religion and caste stand as obstacles. The king carries the girl by force. Both the tribes enter into a war. Many die. Tōttukkāri thinks that these deaths are only due to her. Not able to bear this thought she kills herself. Not able to bear the grief the king also lights a fire and immolates himself. The couple is immortalized. "Religion and caste cannot separate the lovers. They are the true gods". This is the central theme reiterated by the author. This story is sung as a *Villuppāṭṭu* even now. This *villuppāṭṭu* story manuscript is now in the possession of the International Institute of Tamil Studies and is preserved in call No. 316. It has 41 leaves, each with the length of

43.5 cm and the width of 2.5 cm. The same story was published in the year 1947 in book form by Arumuga Nadar. The book and manuscript vary in style.

3. Among the Mackenzie collections, *Kaifieths*, *Vamicāvalikal*, *Varalārūkal* are still unpublished.
4. There are many folk literary works that pick a single episode from a story, epic or purāṇam which are great works of art mainly found in the form of ammanai, poetry that narrates a story, *villuppattu* etc.
5. *Captarisi nāti* is an astrological work. It has twelve volumes. Each volume which deals with a separate rule that has hundreds of horoscope. Each horoscope fortells the events of the concerned person's life in poetry.
6. *Varmakkalai* is Tamils' defensive Martial art. It is one of the rare arts of Tamils. *Varmakkalai* has two main parts, one deals with the offence against the enemies, and the other explains the way to cure the victim who was beaten using the varma beat and the manuscripts regarding this might have been destroyed or kept secret but they have been lost. But at the southern tip of Tamilnadu, we can find manuscripts dealing with the second part. They deal with four important aspects.

- | | |
|-------------------------------------|------------------------------|
| 1. Varmattāṇaṅkal (points of varma) | 2. Symptoms of Varma attack. |
| 3. The methods to relax them. | 4. Varma treatment |

Many of these manuscripts are not printed.

(*Tēraiyaṛ Makākarical* — 1)

7. Medical Manuscripts

These are yet another important art of Tamils.

*"cikāmani venpa ni kaṇṭu cēkarappa
tīraiyaṛ kāppiyam tarunāakam antāti
mākāki karicalenum muṛaiyiyirārūm*

This poem lists the twelve works of *Tēraiyaṛ*. Medical practitioner Dr. R. Tiyaṛarācan has published many of the books of *Tēraiyaṛ*. On

seeking the manuscript named as 'Tēraiyaṛ antāti' Dr. Tiyaṅkarācan says that the manuscript has not been published yet and further explains its importance. He further points out that Tēraiyaṛ is an expert in using words which linger. He further says that the same style is adopted in these manuscripts so we can safely assume that the manuscript is Tēraiyaṛ's work.

This manuscript is now in the library of the International Institute of Tamil Studies and was given the no. 215. The length and width of the leaf are 19.5 cm. and 2.8 cm. respectively. Total no. of leaves is 58. The book prescribes mainly the medicine to be taken in with details regarding dose and number of days one had to take the medicine. Further it explains the name of the corollary medicine to be taken along with the principle medicine. Diet control and antidotes are also explained.

8. Documents

To write grammar and literary works manuscripts of same size were used. But manuscripts with natural length and width were used to write documents and registers. These documents and registers are usually found in the District Collectorates. These manuscripts describe the life pattern of the people.

The Documents found are mortgage bonds, slave bonds, power of attorney documents, agreements, documents to confer rights, sale deeds, lease documents, partition documents, the document to give up the rights etc. These documents enumerate the procedures adopted in the day-to-day life of the people.

9. Records

There are so many historical incidents Registered in the palm-leaf manuscripts.

We can have tenkarai nāṭṭu plate as an example. This record is in the form of palm leaf manuscript. This document describes one dispute of Vicayanakara kingdoms period. The dispute is among the 24 koṅku Kingdoms. In these kingdoms the rivers ānporunai, uppanam, kāñcimāṇati, kāvēri, kuṭakai, ciṇṇāru, nallamaggai, nallāru, and vāni flow. Conciliatory talks were held before the Pandya king Ukkira Vīra Kumāra Pāṇṭian at Miṇāksi Amman Temple Premises. And the dispute was settled. These are related to the rule of Accuta Nāyaṛ.

The grammar and literary works which were written in the manuscripts of their own, were of equal length and width. No palm leaf

of natural length is found. But at the same time to write the documents and records, no uniform palm-leaves are maintained.

This difference shows the indifferent attitude of the Govt. staff. It shows that the Govt. staff were never questioned for their indifferent attitude.

The manuscripts found in the temples, for example in the *Tirunelvēli Ātinātar* temple, *Citamparam Natarācar* temple, *Tiruvāvatuturai āṭṭam* are useful as fundamental documents to show how the temples functioned in that period. Further the manuscripts available in the temples enlighten us about the fees paid by Tēva aṭiyār marapinar for the ceremonies like the *pūmutirai*, *parivattam*, *poṭṭu kaṭṭutal*. The receipts for those fees are also available along with the other temple documents. These documents have also not been printed.

10. The manuscripts of

- | | |
|----------------------|-------------------------|
| 1. nonṭi nāṭakaṅkaḷ | 2. yaṭcakāṇa nāṭakaṅkaḷ |
| 3. vilāca nāṭakaṅkaḷ | 4. villuppāṭṭu |
| 5. Ballads | 6. Ammāṇaippāṭalkaḷ |
| 7. Kummippāṭalkaḷ | |

are based on the old histories, Folk culture, Folk customs, experience of the cultured people and they still possess the hidden meaning. As greater attention is paid to folk studies these days these manuscripts maybe useful to the people who are interested in, provided they come in the printed form.

Manuscript Preservation

*āti kālattiḷ appanai viṭṭavaḷ
arivullōrtam kaiyakap paṭṭavaḷ
vettuntū kuttuntū mēni citaintavaḷ
ōtu kānivaḷ vēciyum allālē
uraittōrukku āyiram poṇun taruvalē.*

This is a riddle on palm-leaf manuscript. The palm-leaf descends from the palm tree. When it's sized it is severed and pierced. After the leaf that has been used for writing it is smeared with turmeric and also the black paste and is pregnant with lofty ideas. This riddle explains how the manuscript is created and preserved.

All worldly things have three stages in their life: 1. origin 2. growth 3. decay. These continuous phenomenon may be due to action and reaction. The manuscripts also have these three stages. When the manuscripts are prepared, precautionary measures are also taken to preserve them.

As soon as the manuscripts are written turmeric paste, the juice of the leaves, black pastes are smeared on the manuscripts. This smearing makes the script easily visible. This is also useful as pesticide.

mañcal kulippātti maiyittu muppālum
miñcappukatta mikavalāntāi (Tamil vītu tūtu-25)

Here the preservation of the manuscripts are symbolically portrayed as the growth of Tamil itself.

While handling the manuscripts they may be broken. To avoid this, leaf with midrib and a piece of wood, are attached on either side of the manuscript bundle. In places where the manuscripts are kept, neem leaves are spread and pieces of vasampu are also placed. During rainy season the bundles were loosened and the leaves are made to hang, and smoke is allowed to pass over them. Thus the moisture is removed. These are the simple and natural procedures adopted to preserve the manuscripts.

Because of the medicinal properties of the preservatives and excessive use of pesticides the manuscripts become worn out in the course of time.

To preserve the original manuscripts the following methods are used:

1. The manuscripts are kept in Fumigation box after adding the necessary chemicals for some times.
2. The manuscripts are brushed twice a year with lemon grass oil or Java citranella oil.
3. Pesticide oil like D.D.T. is sprayed once a month.
4. Para-di-chloropenzene or Mercuric chloride or Gemaxin powder, Napthaline Balls or Bricks are dusted once a week. Any one of these chemicals may be used for the Fumigation box.
5. The manuscripts are exposed to smoke.

Nowadays in Record Offices and in big libraries, a separate wing is established for preservation. The staff of this special wing are given training in preservation methods. Now seminars are conducted on the preservation methods to save the wall paintings, ancient museum buildings, Art Galleries, Epigraphy, Metal Ware, hand written manuscripts etc. in

the tropical countries. These seminars not only discuss the preservation methods adopted in India but also different methods adopted in other countries.

Preparation of the descriptive catalogue

In a bundle of manuscripts usually more than one book is found. It is not possible to classify them according to the subject. The separation of the works is also not possible because the next work continues in the same leaf.

In a library of hundreds of manuscripts it would not suffice to write the names of all books found in manuscript. The Library staff should be able to locate a particular manuscript or book at a short period. For these, details should be recorded clearly and legibly about manuscripts.

1. As soon as the manuscript is brought to the library it should be cleaned and if necessary wooden slabs and smaller thread strings should be properly arranged.
2. To identify easily all the Manuscripts they should be numbered.
3. If a bundle has more than one book, the serial nos. of the books should also be given. These numbers are known as bundle no. and work no.
4. All numbered manuscripts should be Registered in a separate Register. This would help to have the preservation of manuscripts. The Register normally falls under three broad categories.
 1. Bundle Number Register showing the no. of manuscripts bundles.
 2. Stock Register to shown the lists of manuscripts in the library at a particular time.
 3. Accession Register showing the date of arrival of the particular manuscript.

Cards which show the name of the books in the Alphabetical order and cards with a short description of the subject are named as guides to the library use. Special guides to the palm leaf manuscript library is the descriptive catalogue.

The descriptive catalogue of Govt. Manuscripts Library, U.Vē.Cā. Library, Thanjavur Saraswathi Mahal Library, Tamil University and the Institute of Asian studies have the details listed above.

Method of Publication

One has to publish whatever is available in the manuscripts. But it is not an easy task to read them.

For example the word 'poṇ' can be read as poṇ, pōṇa, pēraṇ also. To judge which word is correct one should possess adequate knowledge about the subject dealt with, and the rhythm etc.

For example, the line, *yāriṇu miṇiaṇ pēraṇ piṇaṇē* has been printed as *yāriṇu miṇiaṇ pōṇa piṇṇē*. In spite of the character of manuscripts one should know that the printing of them is different from editing the same.

In the year 1812 A.D., F.W. Ellis published the *Aṟattuppāl* of *Tirukkural*. It is the first publication of a Tamil manuscript. Subsequently in 1824 *Caturakarāti* was published by Tāṇṭavarāya Mutaliār and Rāmacantira Kavirāyar.

In the year 1836 Putuvai Nayanappa Mutaliār published the *Tancāivaṇan Kōvai* and *Nēminātam* Text on behalf of Madras educational society. In 1838, Tiruttanikai Caravaṇapperumāl Aiyar published *Tirukkural* with commentary, which was followed by many editions.

In these editions the first page of the book had the title and the method of publication. In these publications one cannot differentiate between a Manuscript and the printed book. The lines of the poem, the words of the line are printed without leaving enough space. In the case of grammar and literary works no differentiation was maintained even between the poem and its commentary.

These research editions should have the features of the revised editions, after thoroughly analysing the work:

1. Special characters of the book.
2. The history of the author of the book, Commentator-narrator of the work.
3. Printing history of the book.
4. Various classifications of the words used in the book in alphabetical order, for example, literary words, Sanskrit words, words of other languages, Regional dialects, names of villages, important characters, the list of the first words of poem, the list of examples given and references cited should also find place in the edition.

Conclusion .

In future no one is going to write on the palm-leaves. So the necessary training for writing on the palm-leaves is not warranted. Though writing on palm leaves has become obsolete people used to write on them at the time of engagement of marriage. But to understand the views of the earlier Tamil reading and understanding the manuscripts are necessary. For that, publications are also necessary. One should get training to read and publish the manuscripts.

Available places of Tamil Palm-Leaf Manuscripts

	Places	Bundles	Works
1.	Madras City —(8)		
1.	Govt. Oriental Manuscripts Library University Building, Madras — 5	10290	147766
2.	Institute of Asian Studies, Madras-41	562	1098
3.	International Institute of Tamil Studies Madras-113.	465	1200
4.	Dr. U.V.S. Library, Madras-41.	—	2398
5.	Brahmagnana Sabai, Adyar, Madras-20 (Theosophical Society Library, Ms-20)	1500	1500
6.	Indian Medicines Research centre, Madras-106.	1226	2400
7.	Directorate of Indian Medicines, Madras-106	850	
8.	Department of Archaeology, Tamilnadu Madras-113.	150	150
2.	Universities (3)		
1.	Annamalai University, Chidambaram	430	430
2.	Madurai Kamarajar University, Madurai	316	316
3.	Tamil University, Thanjavur	3000	5000
3.	Colleges (4)		
1.	Santhalinga Adigalar Tamil College, Perur, Coimbatore-10	325	520
2.	St. Xavier's College, Palayamkottai	50	50
3.	College of Theological Society, Madura	87	139
4.	V.V.V. College for Women, Virudu Nagar	250	250
4.	Mutts (14)		
1.	Ambalathadiyar Mutt Chidambaram	200	200

	Places	Bundles	Works
2.	Esaniya Mutt, Theradi Pillaiyar Koil St., Chidambaram	200	200
3.	Cittamur Mutt, Cittamur	190	190
4.	Kumaradevar Mutt, Thuraiyur	396	740
5.	Kumaradevar Mutt, Virudachalam	43	84
6.	Mouna Swamigai Mutt, Chidambaram	215	250
7.	Pommapura Adeena Mutt, Maylam	100	100
8.	Porur Mutt, Thirupporur	50	50
9.	Sankarachariar Mutt, Kancheepuram	400	400
10.	Sankarachaiar Mutt, Kumbakonam	130	130
11.	Siravanapuram Koumara Mutt, Coimbatore.	54	54
12.	Tharumapura Adeena Mutt, Tharumapuram	110	481
13.	Thiruvavaduthurai Adeena Mutt, Thiruvavaduthurai	365	1267
14.	Thondaimandala Adeena Mutt, Kancheepuram	93	93
5.	Other Institutions (5)		
1.	Govt. Museum, Erode	113	113
2.	Kalaimagam Kalvi Nilayam, Erode	3	180
3.	Kuntha Kunthar Kalvi Nilayam Ponnur Malai, Vannakampadi	100	100
4.	Saraswathy Mahal Library, Thanjavur	1500	2250
5.	Tamil Sangam Library, Madurai (Pandian Library)	320	486
6.	Individuals (18)		
1.	Agora Sthapathiyar, Jothidar, Melaiyur	200	200
2.	Dr. S. Chidambara Thanu Pillai, Siddha Medial Research Centre, B-32, Anna Nagar East, Madras-102	200	200
3.	Dr. D. James Deva Kamala Arumairaj pattinapakkam, Madras-20	30	30
4.	Thiru. Jayaraman, Nadi Jothitar Govt. Hospital Road, Vaitheeswaran Koil-609 117.	300	300
5.	Karumpayirap Padaiyachi Manikkiramam.	100	100
6.	Mani Gurukkal Kora Nadu, Poompugar	80	80

	Places	Bundles	Works
7.	Dr. T. Mohana Raj, Siddha Medical College Munchirai, Pudukkadai (P.O), K.K District	300	300
8.	Mr. Murugesan (Siddha Doctor) Kilapperumpallam, Poompugar	150	150
9.	Muthaiyap pandaram.	100	100
10.	Thiru. Naganatha Gurukkal, Orrai St., Vallalar Nagar, Mayiladuthurai	100	100
11.	Thiru. Poosaimuthu, Nadi Jothitar, Vaitheeswaran Koil; 609 117.	400	400
12.	Thiru. Ramadoss, Nadi Jothitar, North Street, Swami Malai, Thanjavur-612 302.	200	200
13.	Saminatha Sivachariar, Thiruvavaduthurai, 200	200	
14.	Thiru V.G. Santhosham, V.G.P. Office, Saidapet, Madras-15	350	350
15.	Sthapathiyar Kanja Nagaram	50	50
16.	Dr. A. Thasarathan 11, Rajaji Nagar, Madras-41.	250	250
17.	Veda Gurukkal (<i>ākamac cuvatikāl</i>)	50	50
18.	Vel Murugan, V.A.O. Radha Nallur, Melaiyar (P.O.) (the grandson of Caiva Ellappa Nāvalar)	200	200
7.	Other State Libraries in India (10)		
1.	Andra University, Waltair	200	200
2.	Calicut University, Kerala	200	200
3.	Department of Archaeology, Trivandrum, Kerala	250	250
4.	East India Collection of Tamil Manuscripts, Mysore, Karnataka.	63	63
5.	French Institute of Indology, Pondicherry	700	2000
6.	Gandhi University, Kotayam, Kerala	300	300
7.	National Library, Calcutta	326	326
8.	Oriental Research Institute Library, Venkateswara University, Tiruppathy	1200	1200
9.	Oriental Manuscripts Library, Poona.	4000	4000
10.	Osmania University, Hyderabad	250	250

Palm-Leaf Manuscripts in Tamil and their Preservation

G. John Samuel

At the outset, I would like to emphasize that the present paper is not a research article trying to give a new interpretation or to throw a new light on a particular aspect of Tamil language, literature and culture but a reasonable defence of the necessity to protect the fragile palm-leaf manuscripts in Tamil from further disintegration and deterioration owing to human negligence and natural calamities.

The Social Background

The present pitiable fate of our ancient Tamil Palm-leaf manuscripts is closely associated with the drastic social changes that took place in our country owing to the introduction of an advanced technology and an urban civilization. The palm-leaf manuscripts were the powerful medium for transmission of ideas and knowledge when the Indian Society was based on an agrarian civilization. This pure organic product was the powerful tool for the preservation of our literary, linguistic, cultural and art heritage and the vital part of the superstructure of this society was embedded in these fragile palm-leaves by our traditional scribes with the help of stylus. Consequently, any problem pertaining to the study of palm-leaf manuscripts has to be analysed keeping in mind the society that handled this medium and the shift of that society to a new way of life, new mode of thinking and functioning owing to urbanization.

With the introduction of new technology and urbanization coupled with the laying of railway lines and the advent of western type of education, Indian Society underwent a lot of drastic changes. The introduction of paper and printing press has completely changed the fate of the previous mode of transmission of knowledge. Although printing press was established during the 17th century, it was used mainly for the printing of religious books, especially for the printing of Christian texts and tracts and for the printing related to administrative purposes. The custom of printing Tamil texts from palm-leaf manuscripts came into existence comparatively in later stage. Anyhow, this attempt failed to gain good momentum owing to a number of factors.

Causes for Negligence

1. The Western type of education and the cultural imperialism advocated by Lord Macaulay and others left an indelible impression in the minds of the people that the native cultural traditions are far inferior to that of Europe. This ultimately led to the gross negligence in protecting from decay our cultural treasures.
2. Since the English education gave a lot of hope to get employment in Government and other services, the habit of studying the traditional texts written on palm-leaf manuscripts started deteriorating and these texts came to be considered as object useless for an attractive worldly life.
3. Consequently, there was not much encouragement to the scholars who attempted to bring to print such rare texts. The financial strain faced by the earlier doyens in this field such as Dr. U.Vē. Cāminātha Aiyar and others explains this pitiable and sad plight.
4. Since the pattern of education is shifted from traditional type of education to western type of education, the art of writing in palm-leaf manuscripts as well as the efficiency in deciphering the texts written on palm-leaves started vanishing.
5. Although a number of scholars both native and foreign encouraged the attempt of printing the Tamil texts from palm-leaf manuscripts, these efforts went on very slowly.

The knowledge about Tamil texts written in palm-leaf manuscripts was poor during the period of Dr. U.Vē. Cāminātha Aiyar which is obvious from the fact that even the great epics like *Cilappatikāram* and *Cintāmaṇi* were completely unknown to the Tamils. The slow progress in transferring the texts from palm-leaf to paper was indeed a serious threat to the Tamil texts written in palm-leaves since a palm-leaf manuscript can exist to a maximum period of 300 to 400 years in the climatic conditions of Tamilnadu. Unless they are copied down or printed there is no other alternative but to lose them forever.

In the earlier periods they were preserved by the professional scribes who were employed by the temples and individual patrons for copying down these books although many of them did suffer decay and death with the passage of time. These scribes had a positive contribution to make to the living continuance of Tamil literary tradition. But with the gradual vanishing of such professional scribes, the habit of reading, deciphering and

copying palm-leaf manuscripts has become a very rare practice. This has paved the way for the perishing of a number of rare Tamil texts. All these conditions existed in the earlier stage when this country was under the alien rule with the weakening away of the traditional patronage system of art and literature and with less encouragement bestowed on the preservation of our cultural treasures by the ruling British Government, although a number of Civil Servants like Colin Mackenzie and a few missionaries showed keen interest. It is pitiable that there is not much improvement in the preservation and publication of palm-leaf manuscripts even after independence.

In this scientific and technological age, with its strong emphasis on mechanical material orientation, there is a tendency to view these rare manuscripts of the past as irrelevant to the modern sensibility and assign them an exhibition value. Such an attitude towards palm-leaf manuscripts in Tamil would mean depriving posterity of a significant component of the cultural and literary heritage of the Tamils.

Present condition

Most of the palm-leaf manuscripts stored in various places are unpublished works and they have not been subjected to serious study. If we fail to preserve them there is no way of seeing how many of these manuscripts need to be made accessible to a larger reading public in print. It is also possible that the publication of these unpublished materials may modify or prove wrong the conclusions of our research arrived on the basis of the printed texts.

A tentative survey reveals the pathetic fact that only 25% of the palm-leaf manuscripts in Tamil have been published and the remaining 75% are perishing in the cruel hands of time, and natural calamities. It is obvious that the life span of the existing manuscripts is fast wearing out, and even the best of care and attention may not see them in condition after a century or two. Moreover, the vanishing of the scribe of trained and informed men who could decode and read these palm-leaf writings is indeed a severe threat to their existence.

There are not many around who offer to take systematic training in manuscriptology, nor do the academic institutions in Tamilnadu save one or two, evince much interest in understanding the urgency of such a programme. Given the magnitude of the task, it is not possible to bring them out all in print during the course of another four or five decades. Nor is it necessary that all the versions of a particular text and those that are unworthy of pursuit should be made available in print. But all these works, irrespective

of whether they are worthy of reading by the general or not, have a context in the culture of the land and are necessarily the living records of a cultural tradition worth cherishing. Consequently, it is highly necessary to safeguard this most endangered cultural treasures either by microfilming or by preserving the original in the safest possible conditions.

The store houses of Tamil manuscripts

The list appended in this paper enumerates the approximate number of manuscripts stored in about sixty seven places both in various parts of India and other countries. We are not able to get a clear picture of the Tamil palm-leaf manuscripts in Sri Lanka, Thailand, Burma, China, Japan and other countries. More than 20,000 uncatalogued manuscripts are expected to be with various individuals. Consequently, the number of the most endangered Tamil palm-leaf manuscripts may come around 80,000.

It is estimated that there are more than one thousand manuscripts in Paris out of which Prof. Julien Vinson catalogued only 204, a later catalogue lists 578 works. Major A. Krishnamurthy's detailed catalogue too, lists only this number of manuscripts.

In England, we find small collections of manuscripts kept in 12 libraries; the major holdings among them are the India Office Library (34) and the British Library (99). In Oxford, in the Bodleian Library there are 140 manuscripts. There are small collections in the Royal Asiatic Society Library, London and the Glasgow University Library.

It is stated that there are many a hundred of Tamil manuscripts kept without indexing in Copenhagen, Denmark. Consistent with the great interest that the Germans have been showing in Indian culture, there are good collections of Tamil manuscripts at Halle and Hamburg, Heidelberg, Cologne in Germany. Xavier S. Thaninayagam has stated that there are a good collection of Tamil manuscripts in Portugal, Spain and Italy. Major A. Krishnamurthy in 1960 and Gregory James in 1980 have expressed the view that there are many libraries in the West possessing Tamil manuscripts and the latter writes that 88 organizations are known to possess them and replies from 250 more are awaited. This includes a number of manuscripts available both in palm-leaves and paper.

The conditions of our manuscripts

Although there are many varieties of palm-trees, the leaves of three kinds of palm-trees were used in India, Nepal, Sri Lanka, Burma, Thailand, Indonesia and Combodia. They are the palmyra palm, talipot palm and *Corypha taliera* Roxb. In South India only two types namely the palmyra

palm and talipot palm were used. The leaves of the palmyra palm are rather thick compared to those of the talipot palm and they appear to be more prone to insect attack than the leaves of the talipot palm. The fibres of talipot palm-leaves do not damage easily and are more resistant to decay. The leaves are soft, light coloured when dry and flexible.

Since palm-leaf is a natural product and organic in nature, it is susceptible to different types of deterioration agencies. Consequently, they need to be preserved very carefully. But, unfortunately, most of the existing palm-leaf manuscripts available in the centres listed in the appendix are not preserved properly. Most of these centres have no proper facilities to give treatment to these rare manuscripts, no proper duplicating equipments and experts to decipher and edit them. Many of the Tamil palm-leaf manuscripts available in European libraries are simply labelled as manuscripts of Malabar language and they are left uncared although the climatic conditions help them to live a little more time than in India. Most of these manuscripts kept in the centres of India have already crossed 200 or 250 years of their existence and they are in the verge of getting decomposed and deteriorated. Unless they are protected with clear and systematic planning we will be forced to lose these cultural treasure forever.

The projects of the Institute of Asian Studies

With a view to preserve these manuscripts from further decay the Institute of Asian Studies is launching on the following projects through its Department of Manuscriptology. If these projects are further expanded and intensified it may be possible for us to safeguard all the Tamil palm-leaf manuscripts within a reasonable span of time.

Any project which aims at preserving the rare palm-leaf manuscripts can be undertaken in the following phases and the Institute of Asian Studies is implementing its schemes in this line.

1. Collection
2. Conservation
3. Training programme
4. Computerising Manus Data
5. Microfilming
6. Preparation of Descriptive Catalogue
7. Publication of manuscripts with English version

The collection of palm-leaf manuscripts is highly indispensable since there are a large number of rare works found scattered in fragile palm-leaves

in the remote corners of the villages in Tamilnadu. Such manuscripts are not catalogued and they are not preserved properly. In our campaign we were able to collect more than such rare works. The task of collecting still remains a very difficult job since most of the owners although they are completely unaware of the content of the manuscripts refuse to part with them, thinking that it is a sacred treasure of their predecessors and that their family will be doomed or become a victim to curse if they sell or give away these works. There are also persons who demand very high price for even the manuscripts dealing with necromancy and *Vākatam* or veterinary science. There are still people who are prepared to set ablaze these rare treasures during Pongal or throw them into the river when there is new flood. It is highly necessary to undertake intensive field survey about the availability of the manuscripts and to collect them by all means. The Government can entrust such works with the revenue officials who can collect them with the help of the local scholars in this field. The collection work has to be quickened since any delay in this effort will result in the disintegration of more and more works.

Conservation

Being organic in nature, palm-leaf is subject to different types of deterioration agencies. Climatic factors, light and insects have a very marked effect on palm-leaf. In addition, constant handling and adverse storage conditions add to the forces of deterioration. Several types of defects such as stains, discolouring, damages by insects, fungal effect, splitting of the surface layer, cleavage of the surface layer, fading of writing, brittleness and weakening of the leaves are seen in our rare collections. Even though advanced types of treatments have been developed, there is no centre in Tamilnadu which takes keen interest in using these techniques for the conservation of these fast decaying palm-leaf manuscripts. As a result these precious treasures are miserably getting perished in the hands of the horrible deteriorating agencies. Therefore, it is essential to establish conservation laboratories in all the centres where palm-leaf manuscripts are stored and to employ professional people to give good treatment to them.

Training programme

Since the habit of writing on the palm-leaf manuscripts and reading them had vanished owing to the changes in the mode of communication, the number of persons who can decipher the writings in palm-leaves are also reducing day by day. Consequently, it is highly imperative to give

intensive training to scholars in various aspects of manuscriptology such as deciphering, editing, conservation and preservation and textual criticism. This type of training programme should be an integral part of any project pertaining to palm-leaf manuscripts. Unless this training is given continuously, the future generation may be compelled to lose the opportunity of making use of these manuscripts. Every year, the Institute of Asian Studies is organizing Workshops and training programme and imparting training to a large number of young scholars in this discipline. This type of programme should be organized by all the centres of Tamil palm-leaf manuscripts and if possible such programme may form part and parcel of our regular University courses especially in the Master's degree in Tamil language and literature.

Computerizing Manus Data

Another important programme in which the Institute is engaged in is the computerizing of the informations pertaining to palm-leaf manuscripts in Tamil. This is a part of the programme of the Indira Gandhi National Centre for Arts which is implementing this programme for the entire Indian languages. Through this programme all particulars pertaining to Tamil palm-leaf manuscripts are made accessible to scholars all over the world and Tamil texts available in palm-leaf manuscripts can be subjected to research both in the national and international levels. The format of the Manus Data is given in the appendix.

Microfilming

Since printing of the entire manuscripts is not possible all at once, steps for duplicating them in a different media should be taken immediately. Microfilm and Computer Disks are the better medium for preservation and duplication. It is pitiable that many of the manuscripts centres in Tamilnadu have not even such facilities for duplicating.

The Institute of Asian Studies plans to microfilm the entire Tamil Palm-leaf manuscripts within a period of three to four years. Two table-type microfilm cameras will be taken to the places where the manuscripts are stored and they will be microfilmed in the spot. The target is to microfilm atleast 20 works per day; each camera can microfilm 10 works in about 900 leaves (i.e. 1800 pages in one roll - each shot covering 3 pages). The printout of the manuscripts thus microfilmed will be transliterated into the modern script by a team of editors and they will be fed into the computer disks. The successful execution of this project will protect from decay a significant component of our cultural heritage and contribute a great deal for the enrichment of human knowledge.

Preparation of Descriptive Catalogue

The paucity of adequate Descriptive Catalogue for palm-leaf manuscripts in Tamil is another serious limitation for academic research on these cultural treasures. Such catalogues are necessary to identify the texts for publication as well as to prepare authentic edition comparing various versions of the same text available in various places and centres. There have been attempts earlier at documenting the Tamil palm-leaf manuscripts and cataloguing them. Such catalogues are available for the collections of a few centres. But all of them are inadequate and unrepresentative in so far as they contain very little information on the thematic contents of the manuscripts and their bibliographic history. Again, they do not present a total view of the manuscripts, and more importantly of the various copies of a text and its versions which could remain scattered in different places. The Institute of Asian Studies is engaged in the preparation of an integrated Descriptive Catalogue of Tamil palm-leaf manuscripts in about 30 volumes each in two parts of 1200 pages covering the whole of Tamil palm-leaf manuscripts in India and abroad. The Institute has already brought out three volumes and it is now working on the fourth volume. The format of the catalogue prepared by the Institute is given in the appendix.

Publication of Palm-leaf Manuscripts with English version

These manuscript texts have embodied a wide variety of subject matter from poetry, grammatical treatises and commentaries on astrology, art, architecture, medicine and folklore. Among the manuscripts being preserved at present those dealing with traditional sciences and folk literature are the largest. Of these manuscripts on traditional science, manuscripts on medicine constitute a larger percentage.

These medicinal manuscripts deal with various forms of folk medicines, Ayurvedic and Siddha systems of medicines and their applications to numerous diseases. Many of these manuscripts are anonymous and they are attributed to Akattiyar, the legendry father figure in Tamil literature who is believed to be the author of a Tamil grammar namely *Akattiyam* composed during the period of the second Tamil Caṅkam. A deep study about these rare texts could bring out a wealth of valuable information that could also have a bearing on modern medical science.

An impressive collection of folk-songs of different kinds, a large percentage of them being ballads, have been recorded on palm-leaves and are perishing uncared for in the homes of individuals of the respective areas who are by and large ignorant of and indifferent to the worth and

cultural significance of these manuscripts. The creative spirit that pervades these songs, their melody, their simplicity of style and diction, their blending the human and the divine, history and myth, natural and supernatural, their complete identity with the soil of their birth, their representativeness of a given community and social clan, invest them with a unique charm of their own, and are verily a significant part of the cultural and literary heritage of the Tamils.

Though considerable number of literary texts have been brought out in print, nearly three fourths of the manuscripts remain unpublished. In the nineteenth century, when printing was introduced in Tamilnadu in a wider scale, attempts were made to publish the manuscripts by scholars like Irāmānucak Kavirāyar, Ārumuka Nāvalar, Vicākapperumāl Aiyar, Tāmōtaram pillai, Capāpati Mutaliyār, U. Vē. Cāmināta Aiyar and a few others including some Westerners. Yet this programme was implemented in a haphazard way and no systematic attempts have been taken to transfer all the Tamil texts from palm-leaf to paper with a well planned programme. It is significant to note that even Dr. U. Vē. Cāmināta Aiyar who dedicated his life to this noble task could publish only 74 texts from palm-leaf during his life span. Although this is one of the greatest contributions, these 74 texts form only a very small portion of the big number of palm-leaf manuscripts that are dying a natural death in various places.

The Institute of Asian Studies has a very large publication programme under which a large number of unpublished manuscripts are being published with English version with a view to make them accessible to a wider audience. Under this scheme it has brought out very valuable books such as *The Dateless Muse*, *The Unsung Melodies*, *The Bandit Brothers*, *The First Freedom Fighter*, *Varma Cūttiram* and others which are valuable source materials for the study of the social history of the Tamils and their cultural heritage. If large number of academic centres and Universities undertake similar programme it is not very difficult to preserve from decay the rich cultural treasures of the Tamils which forms a significant component of the composite culture of the people of Asia. The successful execution of this programme by various centres will definitely inaugurate a new chapter in the annals of this great culture.

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2. —————. *Kumarimutal Vārsā Varai*. Madras, 1994.

Appendix I
A tentative list of the Tamil Palm-leaf Manuscripts available in various places

Sl. No.	Place	Manuscripts
1.	Government Oriental Manuscripts Library, Madras 600 005.	15,000
2.	Institute of Asian Studies, Madras 600 119.	1,400
3.	International Institute of Tamil Studies, Madras 600 113.	460
4.	National Library, Calcutta.	355
5.	Saraswathi Mahal Library, Thanjavur.	2,300
6.	Sānthalinga Atikalār Tamil College, Pērūr, Coimbatore District.	350
7.	College of Indian Medicines, Pālayamkōttai.	300
8.	Siddha Medical Research Centre, Madras 600 029.	1,000
9.	Directorate of Indian Medicine and Homeopathy, Madras 600 108.	900
10.	Dr. U.V.S. Library, Madras 600 091.	3,200
11.	Tamil University, Thanjavur.	5,000
12.	Kerala University Oriental Manuscripts Library.	3,300
13.	St. Xavier's College, Pālayamkōttai.	75
14.	Adyar Library, Madras 600 020.	1,500
15.	Cittāmūr Mutt, Cittāmūr.	190
16.	Tontaimaṇṭala Āṭinam, Kāñcipuram.	92
17.	Kuntar Kuntar Kalvi Nilayam, Ponnūr-malai, Venakkanpadi.	100
18.	Kaumāra Mutt, Ciravanapuram.	100
19.	Mayilam Mutt.	100
20.	Pōrūr Mutt, Tiruppōrūr.	50
21.	French Institute of Indology, Pondicherry.	1,200
22.	Government Museum, Erode.	113

Sl. No.	Place	Manuscripts
23.	Venkateswara Oriental Research Institute Library, Tiruppathy.	1,200
24.	Andhra University, Waltair.	200
25.	Osmania University, Hyderabad.	250
26.	Kalaimakal Kalvi Nilayam, Erode, Periyar District.	180
27.	Calicut University, Kerala.	200
28.	Tiruppanandal Mutt, Thanjavur District.	306
29.	Sankaracharya Mutt, Kāñcipuram.	400
30.	Annamalai University, Chidambaram.	300
31.	Tarumapura Ātīṇam, Nagai Quaide-Millet.	300
32.	Tiruvāvaṭuturai Mutt, Nagai Quaide-Millet.	1,265
33.	Madurai Kamaraj University, Madurai 625 021.	300
34.	Madurai Tamil Sangam, Madurai 625 001.	420
35.	East India Collection of Tamil Manuscripts, Mysore, Karnataka.	63
36.	India Office Library, London.	34
37.	Wellcome Medical Research Institute, London.	2
38.	British Museum, London.	99
39.	The Library of the Royal Asiatic Society, London.	37
40.	The Library of the Edinburgh University, Edinburgh.	6
41.	National Library of Scotland, Edinburgh.	4
42.	Huntanian Library of Glasgow University.	10
43.	John Rylands Library, Manchester.	11
44.	The Library of Cambridge University.	20
45.	Trinity College Dublin, Ireland.	1
46.	Bodleian University, Oxford.	16
47.	Austria	9
48.	Federal Republic of Germany	3

Sl. No.	Place	Manuscripts
49.	Czech	31
50.	Finland	2
51.	Denmark	16
52.	German Democratic Republic	14
53.	Italy	26
54.	Norway	9
55.	Portugal	17
56.	Scotland	11
57.	Sweden	29
58.	USSR	4
59.	Belgium	4
60.	England	59
61.	France	63
62.	Netherland	6
63.	Poland	1
64.	Republic of Ireland	15
65.	Spain	2
66.	Switzerland	5
67.	Vatican City	2
68.	Private Collections	20,000
69.	Manuscripts available in Sri Lanka and other Asian countries.	20,000
		<hr/> 83,032 <hr/>

Appendix II

Format of the Descriptive Catalogue

I. MATERIAL DESCRIPTION

- i. Title (both in Roman Script and Tamil)
- ii. Author
- iii. Whether the authorship is ascribed or real
- iv. Commentator and his date (if it contains commentary)
- v. Script
- vi. Date of Composition
- vii. Whether decipherable
- viii. Total No. of leaves
- ix. No. of lines to each leaf
- x. Size of the manuscript (in cm.)
- xi. Complete/incomplete
- xii. Physical condition
- xiii. Missing leaves or portions (beginning/end/intermittent)
- xiv. Place where preserved (Institution/individual)
- xv. Accession No.
- xvi. If it is a copy, date of copying
- xvii. Name and nativity of the scribe/copyist
- xviii. Variant readings, if any
- xix. Medium (prose/verse/pictorial)
- xx. No. of verses/chapters/pictures

II. BIBLIOGRAPHICAL DATA

1. Whether this mss is published
 - If yes,
 - a. Name of the editor
 - b. Place of publication, publisher and date
 - c. Important editions

If no,

- a. Whether a different version of this work is published
- b. If so, whether this mss is consulted in that publication

2. Whether it exists in any other form

III. SUBJECT DESCRIPTION

- i. Subject of the text
- ii. Genre
- iii. Linguistic peculiarities/style
- iv. Whether original/adaptation/translation
- v. Historical/Social/Literary importance
- vi. Summary/abstract of the text
- vii. Beginning (lines)
- viii. Ending (lines)
- ix. Colophon
 - x. Place from where the mss is collected
 - xi. Name of the person from whom it is collected

IV. Additional information, if any

Contributor's signature with date

Appendix III

MANUS

TAMIL

ROMAN

Title (Text/Commentary)
with alternate title
if any, given in brackets

Author
and identification

Subject

Language

Repository and
Accession No.

Reference in Catalogue:

Title of Catalogue	Editor/ Compiler	Place and Year	Volume and Page	Serial No.
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Script

Material	PL	HP	OP	CL	BP	MP	ST
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Condition	Good	Bad	Damaged	Brittle	Wormeaten
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Folios/Pages

Size in cms.

Lines per Page	Letters per line	Total Granthas (in units of 32 letters)
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Illustrated or not

Extent folios	C/Inc.	If Inc. available portion	Missing
Repaired		Bound	Cover Material
Beginning:			

End:

Colophon:

Scribe and his
identification and place:

Date of Mss.
(With A.D. equivalent)

Edition (One of two) :

Editor :

Publisher :

Place and Date :

Series and No : _____

Remarks: Date of Text/Commentary :

With Text/Commentary :

Marginal Notes :

Other Details :

Data entered by :

Reviewed by :

Fed to Computer by :

Palm-Leaf and other Manuscripts in Sanskrit (Available in the four Southern States)

C. Panduranga Bhatta

The main sources of Ancient Indian history are the manuscripts and they help us to counter check the information provided by other sources like inscriptions. Sanskrit Manuscripts that were discovered and published so far brought great revolutions in the existing concept on a particular topic and added new dimensions to interpretation. The remarkable discoveries of Kautilya's *Arthasāstra* and Bhāsa's dramas have contributed a lot to the understanding of the cultural history of our Nation. There are many more works pertaining to different branches of knowledge belonging to different periods of history, still in the form of manuscripts. Their preservation and publication should be the primary concern of the Institutes in which they are deposited. Every ancient work available in manuscript however insignificant it may be from the point of view of content and treatment, must be preserved with great care and attention.

Scripts

We do not have clear evidences to determine exactly the beginning of the script and art of writing in ancient India. The royal edicts of king Asoka (272-236 B.C.) are the earliest datable records so far discovered and deciphered. It is well known that the Brāhmi script developed into two main streams. One stream led to Nāgari or Dēvanāgarī and the regional scripts of North India such as Gujarati, Bengali etc. Another stream developed the South Indian scripts namely Kannada, Telugu, Malayalam etc. The oldest manuscript written in Dēvanāgarī belongs to eleventh century A.D.¹ Old Kannada, Old Telugu, Malayalam, Grantha and Telugu scripts are used in South Indian Manuscripts. The history of South Indian palaeography and Manuscriptology is beset with obscurity for want of continuous records. According to Burnell, a Kannada Manuscript belonging to A.D. 1428 is the oldest palm-leaf in South India.² The script used in the earliest inscriptions of Early Pallavas (A.D.350-500), Visnukundins (A.D. 440-616) of Āndhradesa and Western Gaṅgas (A.D. 400-475), Kadambas (A.D. 345-58), and Bādāmi Cālukyas (A.D. 543-745) of Karnataka is called Kannada-Telugu script. This script was in use in the

whole of South India till A.D.600. In the period of the Pallava king Mahendravarma (A.D. 600-630) the Kannada-Telugu script began to take the shape of the Grantha script. This script was mainly designed for writing Sanskrit texts and engraving Sanskrit inscriptions in Tamil Nadu and Kerala.³ The grantha script survives in the Modern Grantha and its variety Malayalam. The oldest grantha manuscript as identified by Burnell, is of A.D. 1600⁴. This is preserved in the Sarasvati Mahal library, Tanjore (Ms. No. 9594).

Materials

Palm-leaf, birch-bark, cotton and paper are the common materials for writing long texts of literature. The official charters and grants made by kings were generally engraved on copper-plates called 'Tāmra patra' or 'Tāmrasāsana'. The practice of engraving books on copper-plates is also noticed. According to Huen Tsang, king Kaniska caused the Buddhist religious texts to be engraved on copper plates. The lyrical poems called kīrtanas of Annamācārya (A.D. 1408-1503) composed in Sanskrit and Telugu were engraved on many copper plates.⁵ Kadita or cotton cloth was used in Karnataka since cotton is grown abundantly in Karnataka. However, its use was more for account books, official papers, etc., than for literary works. Yaksagāna plays, Haridāsa's songs and vacanas of Virasaivas are sometimes found in Kadita or cotton cloth. Some Jaina Manuscripts are also found in Kadita. The palm-leaf is the most common writing material all over India during ancient times. There are two types of palm-trees called tādī or tāli and tādā or tāla. The tāla is also called Sritāla and the number of Manuscripts of this leaf are not many. According to Hoernle all the earlier Manuscripts are made from the leaves of tādī. The process of making the palm-leaf fit for writing is as follows: First the leaves are dried and boiled or soaked in water. Later they are dried and polished with stone or conchshell and cut to the required uniform size. In Karnataka sometimes leaves were used to be baked in milk or some special decoction containing herbs and then dried and cut to size.

The palm-leaves were written on with ink all over Northern, Eastern, Central and Western India, whereas in the South India the letters were incised with a metallic stylus called *salāka* or *lohakaṇṭaka*. The process of inscribing them with a pointed steel stylus was a tedious job. One has to hold the stylus, which was fairly heavy, with a heavy grip and then inscribe. Drawing of lines crossing the natural lengthwise fibres is easy, but when the movement is along the line of fibres, the leaf is likely to be

torn away. After inscribing, charcoal powder was dusted over the leaf. The engraved lines held the dark powder, while the rest was rubbed off. The Dhavala Manuscripts written in Prakrit language using Kannada scripts, preserved in the Oriental Research Institute, Mysore draw our attention as far as the method of writing is concerned. In these Manuscripts the text is not inscribed, but written with pen and ink. A type of jet black ink has been used and it has never faded. The writing stands out in good relief in spite of the palm leaf turning to brown shade, owing to age. Thus it may be said here that the people of Karnataka discovered the easy way of writing with pen and ink as early as the twelfth century A.D. But it is rather a surprise to note that they have totally ignored it and always used the stylus for inscribing palm-leaves in later days. According to K. Shivarama Karant, this is probably due to the secrecy that was maintained with regard to the recipe of this special ink.⁶ Other types of herbal inks like gall-nut ink fade away after a time and hence they were ignored. The Dhavala Manuscripts are the only instance of writing with quill and ink on palm-leaf obtainable in Karnataka. They had also gone one step further, for they drew figures and decorative motifs and painted them too. Such illustrations are still more rare.

The earliest known Manuscripts of palm-leaf date back to first century A.D. These are the fragments of palm-leaf manuscripts representing parts of two plays ascribed to Āśvaghosa. The Godfrey Collection (4th c.A.D.), the Horiuzi Manuscripts (6th c.A.D.) are the other old specimens so far brought to light. We have numerous palm-leaf manuscripts belonging to seventh and later centuries from Nepal, Bengal and Rajasthan.⁷

As mentioned earlier the oldest palm-leaf manuscript found in South India belongs to A.D. 1428. Perhaps the hot climate of South India could be the cause of the short span of life of the palm-leaves. The palm-leaf is the earliest and most accepted writing material in Ancient India. It is very interesting to note in this context that the size of the copper-plates and birch-bark were used to be cut to the size of the palm-leaf. The Taksasila copper-plates (1st c.A.D.) were cut to the size of the palm-leaf. Similarly the birch-bark leaves of the Bower Manuscripts (5th c.A.D) were also cut to the size of the palm-leaf.

In Karnataka early Manuscripts were written on palm-leaf, and the use of hand-made paper for books begins with the advent of Muslim rulers in the Deccan. Even after that, most of the books were produced with

palm-leaf only. The use of hand-made paper was confined mostly to royal courts. With the common people, the art of writing with a pointed steel stylus on palm-leaf continued, as in earlier days. Upto the dawn of the present century Manuscripts were being written on palm leaf in Deccan and Western India and perhaps in the whole country.

Statistical data

Among the European scholars Aufrecht's contribution to Manuscriptology is something remarkable. He laid down the foundation of taking an over-all view of the entire collection of Sanskrit Manuscripts in the whole world by publishing his *Catalogus Catalogorum* in three volumes. (1891, 1896 and 1903). Kielhorn explored the Manuscripts in North Karnataka districts (then Southern Division of Bombay Presidency) in 1869. Schrader worked at Adyar library, Madras and prepared the catalogue of Manuscripts deposited in Adyar. Arthur Coke Burnell prepared a classified Index to the Sanskrit Manuscripts at the palace library, Tanjore in 1880. Mahamahopādhyāya T. Ganapati Shastri played a major role in the preservation of Trivandrum collection which is now in the Kerala University Manuscript Library, Trivandrum. As it is quite well known he discovered and published the dramas of Bhāsa under Trivandrum Sanskrit Series and thus he did a yeoman service to Sanskrit language.

Mahamahopādhyāya Kuppuswami Shastri supervised the collection and preservation of manuscripts at Govt. Oriental Library, Madras and gave his inspiring guidance to the various research scholars working on Manuscripts. The credit goes to Dr.V.Raghavan for having prepared the plan of the *New Catalogus Catalogorum* and also for having brought out the first eight volumes of the same. He edited and published several rare Manuscripts. He toured the European countries for assessing the wealth of Manuscripts abroad. Professor K.T.Pandurangi has a collection of 2,500 interesting Sanskrit Manuscripts on palm leaf, plates made out of bamboo, and country papers. Sri Vidyādhiśa Sanskrit Manuscript library established by him has already published a descriptive catalogue of about eight hundred manuscripts. Due to the hard work done by these and many other scholars now we are in a position to give the statistical data of the palm-leaf and other manuscripts available in various Institutions situated in South India. State-wise data are given below.⁸

Name of the Institute	Number of Manuscripts preserved
Andhra Pradesh	
Sri Venkateshwara University Oriental Library, Tirupati	9,150
Rashtriya Sanskrit Vidyapith (Deemed University), Tirupati	4,055
Andhra University Library, Waltair	2,000
Sri Raghavendra Swami Mutt, Mantralaya, Kurnool Dist.	1,000
Warangal Historical Research Society, Hanumakond, Warangal	40
Karnataka	
Oriental Research Institute, Mysore	45,000
Danashala Mutt, Shastra Bhandara, Mudbidre	2,555
Sri Parimala Samshodhana Mandira, Nanjangud	2,000
Sri Uttaradi Mutt Granthalaya, Bangalore	1,500
Sri Vidyadhisa Sanskrit Manuscript Library, Bangalore	1,200
Maharaja Sanskrit College, Mysore	1,600
Sri Uttaradi Mutt Granthalaya, Hospet, Bellary Dist.	1,000
Sharada Bhavan, Bagalkot, Bijapur Dist.	1,000
Sri Sode Mutt, Sode	1,000
Sanskrit College, Melkote, Mandya Dist.	850
Sri Moorusavira Mutt, Hubli	500
Sri Pejawara Mutt, Udupi	433
Carukirti Panditacarya Jain Bhandar, Sravanabelagola	407
Sri Krishnapur Mutt, Udupi	354
Sri Sivayogamandira, Badami Taluk, Bijapur Dist.	300
Viravani Jain Siddhanta Bhavana, Mudbidre	300

Name of the Institute	Number of Manuscripts preserved
Kerala	
Kerala University Manuscript Library, Trivandrum	35,162
Govt. Sanskrit College, Tripunithura	2,479
Sukriteendra Oriental Research Institute, Cochin	850
Tekka Matham, Trichur	360
Nadvil Mutt, Trichur	179
Brahmasva Mutt, Trichur	91
Public Library, Trivandrum	36
Pondicherry	
French Institute of Indology	12,709
Tamil Nadu	
Govt. Oriental Manuscript Library, Madras University, Madras	31,412
Maharaja Serfoji Sarasvati Mahal Library, Tanjore	30,377
The Adyar Library and Research Centre, Madras	20,000
East India House Manuscript Library of the Board of Examiners, Madras	1,249
Upanisad Brahma Mutt	670
Kanchi Kamakoti Peetha Mutt	543
Rameshwaram Devasthanam Patashala, Madurai	374
The Kuppuswamy Sastri Research Institute, Madras	244
Madurai Tamil Sangam, Madurai	129
Annamalai University Library, Annamalai Nagar	55
Ahobila Mutt Sanskrit College, Madhurantakam	53
Kallalagara Devasthanam Library, Madurai	53

Data of Palm leaf and other Sanskrit Manuscripts in private collections are as follows.⁹ According to the information available in the *New Catalogus Catalogorum*, Karnataka has more than 2,954 Manuscripts in private collections. Tamil Nadu has more than 2490 Manuscripts in private collections, followed by Kerala which has 1,685 Mss and Andhra has more than 200 Mss. In 1965 the National Institute of Sciences of the Govt. of India prepared a list of scientific manuscripts preserved in various Oriental Research Institutes and Manuscript Libraries in India. The subject wise list prepared by the Institute is given below:

Subject	Number of Mss.
Astronomy	262
Medicine	147
Lexicography	122
Physics	45
Mathematics	35
Architecture	31
Alchemy	20
Botany	7
Geography	7
Zoology	6

There are many unpublished palm-leaf manuscripts related to various disciplines. *Bhelasamhitā* Ms is preserved in the Sarasvati Mahal Library, Tanjore. The Manuscript belongs to 1650 A.D. and it has been written legibly. It consists of six chapters namely (1) Nidānasthāna (2) Vimānasthāna (3) Śarīrasthāna (4) Indriyasthāna, (5) Cikitsāsthāna and (6) Kalpasthāna. This work was written by Bhela, one of the six disciples of Ātreya Maharsi, who flourished in the Punjab region. It is said that Vāgbhata made use of this work extensively. According to H.L.N. Bharati the subject of medical science enunciated in this work has not been found in any of the ancient treatises on medicine including *Carakasamhitā*¹⁰. This work has a list of diseases that occur either due to unnatural elements or malnutrition. *Cārucaryā* is a Manuscript which deals with medical science. This was supposed to have been written by king Bhoja of Paramara dynasty in the 11th century A.D. This contains many rules that are to be followed

from waking up in dawn down to the time of retiring to bed in the night. A copy of this Manuscript is preserved at Sanskrit Academy of Hyderabad.

Dravya Ratnāvali is another Sanskrit Manuscript written on paper in Telugu script. This work deals with vegetables, cereals, fruits, milk, curds, fish, mutton etc. This work belonging to 18th c.A.D. resembles the modern *Materia Medica*.

Rāmacandrikā is another Sanskrit work written in Dēvanāgarī script on old hand-made paper. It describes reasons for about sixty diseases, their symptoms, nature and also the method of curing them. This manuscript belongs to 19th c.A.D.

Ayurvedābhisārikā written in Dēvanāgarī script on paper deals with diseases inherent in human body, diseases that strike different organs of the human body, diseases related to woman and children and subjects pertaining to chemical and medical sciences.

Srītattvanidhi is also an unpublished Manuscript preserved in the Oriental Research Institute, Mysore. This was produced under the patronage of Mummudi Krishnadevaraja Wodeyar III during the year 1800 by the Mysore Chitrakara School of Arts. This Manuscript is a marvellous specimen of painting and it contains more than 1500 colour paintings on paper. This work has been divided into nine sections, namely, (1) Śaktinidhi (2) Viṣṇunidhi, (3) Śivanidhi (4) Brahmanidhi (5) Grahanidhi (6) Vaiṣṇavanidhi (7) Śaivanidhi (8) Āgamanidhi (9) Kautukanidhi.

The characteristics of several deities are depicted according to dhyānaśloka. Several species of animals and instruments of warfare are also depicted and these depictions follow the description found in the respective sciences. Therefore *Srītattvanidhi* is of great interest not only to the artists and philosophers but also to learned scholars interested in studies like zoology, sociology, culture and so on.

The discovery of an illustrated Manuscript of the *Āraṇyakaparva* of the *Mahābhārata* proved to be a major breakthrough in art history.¹¹ It is dated 1516 A.D. and the illustrations found in this Manuscript are important as the very first known and dated examples of the proto-Rajasthan painting. The L.D. Institute at Ahmedabad, Salar Jung Museum, Hyderabad, Adyar Library, Madras and a few other libraries and museums have illustrated Manuscripts in their collections.¹² The Dhavala Manuscripts titled Dhavala, Mahādhavala and Jayadhavala are preserved at Oriental Research Institute, Mysore. These manuscripts have many illustrations. Their texts have been printed. The age-old leaves are

reinforced with a layer of fine silk cloth, to prevent further damage while handling them. These Mss belong to the early part of the twelfth century. The palm leaves used in writing are the biggest in size, each one measuring 66.5 c.m. long and 7 c.m. wide. Most of the illustrations contained in these volumes occupy the right and left margins of the palm leaves, the middle portions being devoted to its textual content. They are usually two to three inches high and four inches long. Jain Tirthankaras, Munis, Yaksas and Yaksinis are illustrated, in these Mss. The fine draftsmanship and charming flat colours are the two main elements that characterise these illustrations. Dr. Shivarama Karant observes, "As far as Karnataka is concerned these manuscripts are the most ancient and richest sources of miniature paintings available to us."¹³

United States and Canada are reported to hold 19 illustrated *Bhagavadgītā* Manuscripts. Stephan Hillyer Levitt has scrutinised thirteen Manuscripts preserved in United States. According to him in these Manuscripts 19 verses of the tenth chapter of the *Bhagavadgītā* yield 76 illustrations, one for each foot of verse.¹⁴

These Manuscripts contain illustrations of the ten incarnations of the God Viṣṇu. Other illustrations are related to Book 10 of the *Bhāgavatapurāṇa* and to the *Harivamśa*. One of the interesting features of illustrations noticed by Stephan Hillyer is that these illustrations sometimes function as commentary. To substantiate this point the following examples may be cited: Franklin Edgerton has suggested that in *Bhagavadgītā* 10-13-14 the Sanskrit 'asito devalo' is to be taken as one name referring to an 'Asita Devala' mentioned elsewhere in the *Mahābhārata*.¹⁵ The traditional interpretation is in favour of taking the phrase to refer to two sages, Asita and Devala. The interpretation of the artist in one of these manuscripts supports the traditional interpretation.¹⁶ In this illustration four sages mentioned in verse 13 are depicted. Nārada is depicted second to the left holding in his left hand the vīṇā, which was invented by him. To Nārada's right is Vyāsa who has the epithet sāśvata (eternal). To the far right and far left are Asita and Devala, though it is not clear which is which.

In another illustration we have Arjuna's Chariot amidst the two armies of the Kauravas and Pāṇḍavas.¹⁷ The banner post attached to Arjuna's chariot is depicted here as a monkey holding a staff to which is attached the banner, interpreting the epithet 'kapidhvaja' found in *Bhagavadgītā* 1.20-33 in this manner rather than as 'having a banner characterized by a monkey'.

Also interesting in this illustration is that Arjuna, Kṛṣṇa and the Pāṇḍava forces wear sectarian marks, whereas the Kaurava forces wear none. The import is that the Kaurava forces are irreligious forces. Thus these illustrated Manuscripts function as valuable commentary on local Indian culture and on native interpretations of mythology and text and hence they must be published and studied at the earliest so that they may provide help in reconstructing the ancient texts besides throwing light on ancient history and culture.¹⁸

Textual Criticism and South Indian Mss.

The South Indian Manuscripts have made rich contributions to the field of textual criticism. Ānandatīrtha (1238-1317) at the beginning of his *Mahābhārata Tātparya Nirṇaya* dwells on the nature of the text of the *Mahābhārata* as available in his days. He observes how the text has been tampered with. He finds new material added and part of the text omitted, some lines interchanged and some others substituted by different ones - all due to ignorance. According to him the text of the *Mahābhārata* is in a much confused state; much of its bulk is lost beyond recovery.¹⁹ Vādirāja who flourished in the latter half of the 16th century wrote a commentary on the *Mahābhārata Tātparya Nirṇaya*. In it he explains each of the points raised by Ānandatīrtha. According to him sometimes later day scholars interpolated stanzas composed by themselves in order to promote their own theories and views as being embodied in the *Mahābhārata*. Similarly, those verses and passages which go against one's line of thinking are deleted to facilitate one's argument that such portions are not in one's copy. Even honest scribes often become victims of ignorance and commit substitution and such errors²⁰. Thus Ānandatīrtha and Vādirāja who flourished in South India were aware of the problems faced by the modern scholars dealing with the ancient texts.

Southern Manuscripts have helped to a great extent in fixing the exact readings of the *Rāmāyaṇa* and the *Mahābhārata*. A few instances may be cited here. According to the critical editors of the *Rāmāyaṇa* when Northern and Southern recensions do not agree, preference should be given to Southern recension, as it seems to have preserved the text in an older or original form. A few instances are cited below: A verse in the *Rāmāyaṇa* (I. 2-11) reads as follows: *Tāṃ śonitaparītāṅgaṃ veṣṭamānaṃ mahitāle bhāryā tu nihataṃ dr̥ṣṭvā rurāva karuṇāṃ giram*.²¹ North Indian Manuscripts read 'ceṣṭamānaṃ' instead of 'veṣṭamānaṃ'. 'Veṣṭamānaṃ' means turning round, revolving and it is an old usage. It is found in the *Mahābhārata* also. Another verse in the *Rāmāyaṇa* reads as follows:

*Pathandviyo vāgvr̥sabhatvamīyāt
syātksatriyo bhūmīpatitvamīyāt/
vanigjanam panyaphalatvamīyāt
janaśca śūdropi mahatvamīyāt//*

North Indian Manuscripts read 'śṛṇvan' instead of 'janaśca' and thereby indicate that Śūdras cannot read the *Rāmāyaṇa* but listen to it. The South Indian Manuscripts permit the Śūdras to read the *Rāmāyaṇa*. According to the critical editors of the *Rāmāyaṇa* this shows that Northern recension represents a later stage of the Epic when the Śūdras were assigned a lower status. The direct quotations of many passages of original texts found in later literature such as works on grammar, alamkāra, anthologies and commentaries are of great value to decide the correct reading. In the *Kundamālā* of Dinnāga there is a verse addressed by Lakṣmaṇa to Sītā which reads;

*Vāmena nīvāralatām kareṇa
jānum samālambya ca dakṣiṇena/
pade pede me padam ādadhānā
śanaiḥ śanai retu muhūrtamārayā//²²*

Here Lakṣmaṇa is advising Sītā to move slowly towards the Ganges catching hold of the creeper with the left hand and supporting the knee with the right. The term 'nīvāralatā' is a problem to the editors. Woolner in his translation pointed out that the term is not clear. 'Nīvāra' is wild rice and it is not strong. But all Manuscripts read 'nīvāra'. This verse is quoted in the *Unādimanīdīpikā* of Rāmabhadra Dīkṣita and *Bhāvaprakāśana* of Śāradātanaya. In both these texts we have 'vānīralatā' for 'nīvāralatā'. 'Vānīralatā' means rattan reed growing abundantly on river banks. Such a transposition of letters on the part of a scribe is quite common.²³ Ancient commentaries are valuable in restoring the original text. Kerala has the reputation as a region where the Manuscripts are generally found to preserve the original readings. A.K.Warder feels that even the critical editions of Kālidāsa's works brought out under Government auspices have not paid adequate attention to the Manuscripts from the South India especially Kerala.²⁴

In support of Warder's contention we may cite the following instances: In the *Raghuvamīśa* of Kālidāsa the text given by Mallinātha reads the following verse.

*Kharjūrīskandhanaddhānām
madodgāra sugandhiṣu/*

*katessu karinām petuh
punnāgebhyah śsilimukhāh//*

It occurs in the midst of verses describing Raghu's military march in the west coast, but its position there is improper because 'kharjuri' (date-palm) is not seen there. The description of bees leaving the Punnāga flowers and warming at the cheeks of the elephants, being drawn by the ichor flowing there also suggests that this verse is interpolated. As it is known the punnāga tree also does not grow in the desert. This verse is not found in the commentary of Arunagirinātha. Prof. S.Venkitasubramaniya Iyer observes: "Kālidāsa would not have given together two trees which do not grow in one region. There is every possibility therefore, of this verse being spurious".²⁵ In another verse namely, 'Bhayotsrṣṭavibhūṣanām tena keralayositam', Arunagirinātha reads 'colakayositam' instead of 'Keralayositam'. In this verse Kālidāsa describes the dust raised by the marching army as settling on the forelocks of the women who gave up their ornaments out of fear. According to scholars this does not suit Kerala which is an evergreen land with dense forests full of hills and dales and profuse vegetation and growth of thick grass even on the pathways that no dust will be raised anywhere.²⁶ They also say that the women of Kerala have never been fond of jewellery and least hesitate to give them up even if they had any. They point out that it suits the Cōla country which is a plain where dust is common and where women are known for their attachment to ornaments. Arunagirinātha who hails from Kerala finds the text to be not referring to that at all although aware of such a reading. This shows his objectivity. It may be pointed out here that Arunagirinātha's commentary has some noteworthy omissions, changes in the order of the verses and variants in the forms of many words. He has interpreted the text as he got it and not tried to improve readings.²⁷ It is unfortunate that such a commentator is not at all critically consulted by the scholars who have brought out the critical editions of Kālidāsa's *Raghuvamśa*.

Another South Indian commentator who has contributed to the field of textural criticism is Kāṭayavema. A few readings found in his commentary on the *Abhijñānaśākuntala* are cited below: In the verse 'Tivraghātapatihatataru', 'pādākṛṣṭa' is the reading of Rāghavabhatta. D.K.Kanjilal has selected 'praudhākṛṣṭa'. Patankar feels that 'Krodākṛṣṭa' is the reading of the Oldest Devanāgarī Mss. He prefers this reading because it is more natural that the creepers should have been dragged on by the chest of the elephant as it forced its way through them. Kāṭayavema's reading is 'Krodhākṛṣṭa' and the change of 'Kroda' to 'Krodha'

is easily explainable. A similar expression of Kālidāsa found in *Raghuvamśa* also supports this.²⁸

In the third Act after verse nine in the speech of Śakuntalā we have 'athavā prasiñcata me udakam'. The reading adopted by the critical editors of *Abhijñānaśākuntala* is 'tilodakam' instead of 'udakam'. Many other texts including that of Rāghavabhaṭṭa read 'tilodakam' in the place of 'udakam'. The reading 'udakam' appears to be old. In the earlier works like *Rāmāyana*, 'Udaka' is the word used for an offering of water to the dead.²⁹ This point gains strength from the references found in the earlier *Smṛti* writers. Gautama and Vasiṣṭa prescribe water alone.³⁰ Only according to later writers, water mixed with sesame is to be offered thrice on the day of death to the deceased after reciting his gotra and name.³¹ This supports the reading found in the commentary of Kāṭayavema. In another verse namely 'śśusrūsaśva gurūn' (IV Act) the reading found in Bengal and the Mithila recensions is 'bhogeshvanutsekini'. Kāṭayavema's commentary also gives the same reading. But Kashmir recension reads 'bhāgyeṣva nutsekini' and this reading has been preferred by many critical editors of this drama. But there are many other evidences which support the reading of Kāṭayavema. Vātsyāyana in his *Kāmasūtra* says that a house wife should always serve her in-laws and she should not get engrossed in luxurious things: 'Svaśrūsaśura paricaryābhogeṣu anutsekah'.³² Thus the suggestions of Vātsyāyana are the same as those of Kārṇa given to Śakuntalā. The guidelines of both the texts have been expressed in similar words also. Thus the reading found in Kāṭayavema gets the support from the text of Vātsyāyana. This verse as cited in *Alamkāra* works and *Anthologies* contains the reading 'bhogeṣu' only.³³ It can be said that South Indian Manuscripts have made significant contributions to the field of textual criticism and therefore they have to be studied with greater attention.

Sanskrit Mss outside South India

It is necessary to take up the task of collecting the information related to the *wealth of Sanskrit Mss in India and Abroad*. Dr. Jenar's *Catalogue of Catalogues* gives us an idea of the wide range of the efforts of collection and cataloguing of Sanskrit Mss in India and abroad. Dr. V. Raghavan's volume on Manuscripts, Catalogues and Libraries also gives this information in a nutshell. *The New Catalogus Catalogorum* published by the Dept. of Sanskrit, University of Madras also gives information regarding all Mss available in Institutions.

A list of palm-leaf and other Sanskrit Manuscripts available in other parts of India is given below.³⁴

Name of the State	Number of Mss Preserved
Gujarat	1,08,000
Rajasthan	1,00,000
Maharashtra	80,000
Uttar Pradesh	60,000
Jammu and Kashmir	13,500
Bihar	10,000
Punjab	8,577
Madhya Pradesh	6,000
Haryana	4,633
Delhi	4,500
Goa	1,500
Assam	433

Data of Mss preserved abroad is given below:

Name of the country	Number of Mss. Preserved.
Great Britan	26,000
Germany	10,000
Pakistan	9,200
Srilanka	2,456
France	1,500
Denmark	1,400
Nepal	1,130
Tibet	663
Austria	500
Russia	466
Japan	82
United States of America	15

Mss Libraries in South India

South India has played a dominant role in rescuing the cultural heritage of India. All great kings of the South established great centres of learning and encouraged scholars and poets. In Karnataka, Banavāsi was a centre of learning during Kadamba period. Kalyāna, the capital of Eastern Cālukyas, became the centre of learning during Cālukya period. The three great Ācāryas - Śaṅkara, Rāmānuja and Madhva made Sringeri, Melkote and Udupi respectively their headquarters. Eminent scholars belonging to the schools of Vedānta propounded by the three great Ācāryas flourished in these centres.

Bahamani rulers also encouraged education and built libraries. Muhammad Shah Bahamani built a library at Bidar containing 3,000 volumes. Muhammad Gawan, the minister, had a personal library of 35,000 Mss.

The Andhra Pradesh also developed several educational centres through the centuries. The Chittoor district is rich in private Mss deposits. In the rural areas of Bellary, Anantapur, Guntur and Krishna districts also Private Manuscripts collection are found.

Tamilnadu also encouraged Sanskrit learning especially in the period of Pallavas who ruled from Kāñcīpuram. We find great centres of Sanskrit learning at Tañcāvūr, Maturai, Citamparam, Srīraṅgam and Kumbakōṇam, Kerala and other coastal regions namely Tulunātu and Kōṅkaṇ have had many centres of Sanskrit learning. Trivandrum, Cochin, Trichur, Palghat have been the centres of Sanskrit learning in Kerala. The benevolent rulers of Travancore and Cochin encouraged Sanskrit Studies all along and because of this Kerala became the richest in respect of Sanskrit Manuscripts in India.

The military and civil officers of European settlers and Christian Missionaries showed great interest in Sanskrit Studies and Sanskrit Mss. Because of their untiring efforts many Manuscript Libraries and Research Institutes came into existence in British provinces and Native States in India during eighteenth and nineteenth centuries.

Colonel H.S.Olcott is the founder of the Adyar Library and Research Institute situated in Madras. He established this renowned Institute in 1886 for the revival of oriental literature and for the stronger mutual regard between the learned of East and West. Dr. Otto, F.Schrader, Dr.James, Dr.C.Kunhan Raja and Dr.V.Raghavan were associated with this centre. Now under the guidance of Dr.K.K.Kunjunni Raja, the centre is

continuing its work. Many important works related to Yōga, Vedānta, Mīmāṃsa, Sāhitya, Saṅgīta, etc. are published from this institute with critical notes and valuable appendices.

Madras Govt. Mss Library is now located in the University of Madras. The descriptive catalogue of the Mss deposited in it are published. More than a hundred works are edited and published. Mm.Kuppuswamy Shastri, Dr.C.Kunhan Raja, Dr.V.Raghavan were associated with this library.

The Post-Graduate department of Sanskrit in the University of Madras is carrying out a big project of *New Catalogus Catalogorum* initiated and ably carried out by Dr.V.Raghavan. So far it has brought out thirteen volumes and other volumes are being prepared under the able guidance of Professor N.Veezhinathan.

Maharaja Serfoji established the famous Sarasvati Mahal Library at Tañcāvūr during A.D. 1798-1832. He added to this library a large collection of Mss inherited by him from the library maintained by his predecessors of Maratha rulers and still earlier by the Telugu Nayakas who ruled Tañcāvūr. There are thousands of Mss of Palm-leaf and other materials deposited in this library. Burnell published a classified list of Sanskrit Mss in 1878-80. The descriptive catalogue has been published in twenty volumes between 1926 and 1952. More than two hundred Sanskrit Manuscripts have been edited and published by this library so far.

The Kuppuswamy Sastri Research Institute was established in 1944-45 and it has completed fifty years of its successful and purposeful existence. The Institute was set up in memory of the great Sanskrit scholar and Indologist of international repute, Mahāmahopādhyāya Kuppuswami Sastri. It has a collection of very rare and valuable books numbering over thirty thousand apart from Mss in palm leaves and paper. Eminent men like V.S. Srinivasa Sastri, Dr.S.Radhakrishnan, Dr.C.Sivaramamurti and Dr.V.Raghavan were associated with this Institute.

The Institute of Asian Studies came into existence in the year 1982 due to the efforts of a group of Indian and foreign scholars. It has been established as an international centre for promoting interdisciplinary investigation of the literary and cultural facets of the different Asian countries. The Institute has a plan to collect all the materials available in Mss and rare books elsewhere by use of microfilm and xeroxing methods. The Institute has a plan to prepare an exhaustive descriptive catalogue of Mss. The publication division will publish the culturally significant works available in Mss in different languages with their English translation. The

Institute has already published a few volumes of Descriptive Catalogue of Tamil Palm-leaf Mss.

The Oriental Mss Library of Kerala University has a collection of about 40,000 Mss. It includes the Mss of Palace library, Curator's office library, and the former Govt. Oriental Mss Library. Trivandrum obtained international reputation by the startling discovery of Bhāsa's dramas. In the Trivandrum Sanskrit Series many valuable Mss related to literature and Śāstras were published. Mr.T.Ganapati Shastri made remarkable contributions to Manuscriptology.

The Oriental Research Institute, in Mysore was established in 1891 as a Govt. library and later it was transferred to Mysore University in 1916. It became a research Institute in 1943. The credit goes to Dr.R.Shamashastry for having discovered and published the Arthashastra of Kautilya in 1909. This Institute's collection of palm-leaf and other Mss is an enviable achievement over the years representing all branches of learning. Among these, the Dhavala, Jayadhavala and Mahādhavala Mss of Moodabidri are the most important. Besides these more than 2500 microfilm copies of the palm-leaf Mss from Sravanabelagola Mutt and Hombuja Mutt are obtained. The Institute has a big collection of Jain works in Sanskrit and Prakrit. The Institute gives primary importance for preserving and conserving Mss and other records of ancient Indian culture and civilization. It also intends to bring out critical editions of rare and valuable works. Seventeen volumes of Descriptive Catalogue have been published. More than 125 Mss. are critically edited and published.

Sri Venkatesvara University Oriental Library was established in 1939. It has more than 9,000 Mss. It has published twenty-five works. The Sanskrit Academy of Osmania University has published some rare Mss. Andhra Pradesh Sahitya Academy has published the significant commentaries of Kāṭyavāsa on the three dramas of Kālidāsa.

Catalogues

The origin and development of descriptive catalogue of Mss have been described by Dr.S.K.Belvalkar in the introduction to the first part of the descriptive catalogue of the Mss Library of the then Govt. of Bombay. The first catalogue of Sanskrit Mss appeared in 1807. Since then about 278 catalogues have been published in different parts of the world. Out of them more than two hundred catalogues are published in India.

Some scholars due to negligence decide the subject of the Manuscript on the basis of the title of the Manuscript. But the title may be misleading.

In 1870 Kelhorn published a list of possible hurdles and difficulties that pose during the preparation of descriptive catalogue of Mss and warned the scholars about such hurdles.

A special committee of experts appointed by the Govt. of India in 1961 has devised a proforma for the descriptive catalogue of Mss in all Indian languages. This proforma has eleven vertical columns.³⁵ This proforma provides for the description of practically all that a user of the catalogue would look for. The committee mentioned above has also designed a frame work of the main and secondary subject headings for Sanskrit literature. It covers the entire literature of Sanskrit language relating to Brahmanical, Buddhist and Jain writings. A Govt. of India note states that an Appendix to each volume of Mss catalogue must be added. This Appendix on rare Mss should include extracts of the beginnings, end and colophon, as also any other extract of exceptional significance from the Mss and lists of authors, works etc. cited.

Preservation

But for the high regard entertained by our ancestors for manuscripts since the art of writing came into existence the transmission of the wide variety of thought that now permeates our life and culture would have been an impossibility. In spite of the progress which has brought home to the Indian scholars the importance of their national wealth the work of publishing Mss has not received the attention it deserves. It may be noted here that the religious texts and texts associated with a religious sect or institutions have been preserved with much greater care than secular texts and texts not associated with any group or institution. Among secular texts many must have been neglected or allowed to disappear because they offended some ethical principle. Even otherwise, given the climate of India and the use of palm-leaf or bark, texts survived only through special care given for special reasons. The disappearance of the original *Brhatkathā* of Guṇādhyā is a case in point, perhaps an exemplary case. Another kind of selective neglect must have happened in the case of the *Kuttani-mata* of Dāmodaragupta, an eighth century work in Sanskrit, in which a young courtesan is instructed in the ways of whoredom by an experienced procuress. Within two centuries of its composition in Kashmir it became so well-known and widely read all over the country that many a stanza from this poem was quoted in works on poetics and grammar as well as in anthologies though often without mentioning the source. But by about the 13th century it stops being quoted, then it stops being mentioned altogether, and would probably have joined the huge mass of undiscovered

Sanskrit works had not several Mss been unearthed between 1883 and 1898. A shift in literary taste in the 13th century probably resulted in the work's being neglected. Had the work not survived, we would never have known that an erotic-satiric poem in Sanskrit had been written as early as the 8th century.³⁶ Other such wholly secular works may also have been relegated to oblivion for similar reasons.³⁷ All research in Sanskrit and Indology mainly depends on the Mss and the earlier we exploit these decaying sources of our history and culture the better for the enrichment of our literature and history. A verse quoted below brings out the trouble taken by the scribes in writing the Mss:

*Bhagnaprastakatigrivah stabdha dr̥stiradhomukhah/
Kastena likhitaṁ granthaṁ yatnena paripālayet//*³⁸

Bending the neck, back and the spinal cord, and fixing the eye on the text with the face bent, the Mss are copied with great difficulty. Therefore, these should be preserved with great care. Another verse asks us to protect the Mss:

*Tailād rakṣet jalād rakṣed rakṣet śithilabandhanāt/
mūrkhaḥaste na dātavyamevam vadati pustakam//*³⁹

Protect from the oil, protect from the water, protect from loose tying. Please do not hand over to the careless fools. These remarks of the scribes indicate their devotion and anxiety.

The ancient writing materials like the palm-leaf get degenerated very soon. Therefore the Mss must be cleared from dust and smeared with lamination oil. They must be kept away from pests or insects by preserving them in almirahs having plenty of light and air. Even if a leaf or any part of the leaf gets destroyed, it results in heavy loss to the scholars who pursue Ms study. Because of this it is advisable to take microfilms of all the leaves separately. Whatever be the size of a Ms in length and breadth, it is possible to photograph it to a reduced size, usually 35 mm with all the details intact. The space required to preserve the Mss in the form of microfilm roll is very little and the problem involved in the transportation of a Ms from one place to the other can also be prevented. The possible damage and destruction of ancient Mss owing to natural calamities can be averted by preserving them in the form of microfilm. Among the unpublished Mss it is necessary to identify those which are more important and they must be microfilmed. Rare Mss must be collected by tour, by public appeal and by micro-filming. A Manuscript department like the Epigraphic Department for the proper care and scientific cataloguing of Mss must be established soon. The Manuscript libraries must concentrate

their resources and attention on the cataloguing of their Mss in general and preparing their descriptive catalogues in particular. Computer may be used both for preparing descriptive catalogues and preserving old Mss. The example set by the Indira Gandhi National Centre for Arts, Delhi, may be followed by the Manuscript Libraries. This centre has taken up the task of feeding rare and important Mss into computer. Once the data are fed into the computer it becomes easy for copying and carrying out further study of the Mss without damaging the Mss.

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3. Srimannarayana Murthy, *Methodology in Indological Research*, pp. 70-75.
4. A.C. Burnell, *op. cit.* p.41.
5. Srimannarayana Murthy, *op. cit.* pp. 92-97.
6. K. Shivarama Karant, *Karnataka Paintings*, p.28
7. See H.P. Sastri, *Catalogue of Palm-leaf and Selected Paper Manuscripts*, I, Introduction of Cecil Bendall, p. 52. and 140.
8. K.T.Pandurangi, *op. cit.* pp. 43-55.
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10. H.L.N. Bharati, *Indian Textual Criticism and Book Production*, p.64.
11. Now it has been deposited in the Asiatic Society Library, Bombay.
12. See Dr. Hirananda Shastri's book *Indian Pictorial Art as Developed in Book Illustration*; See also Dr.V.Raghavan's article related to this in *The Journal of Oriental Research*, Madras, Vol. 27.
13. *Karnataka paintings*, p.34
14. Stephan Hillyer Levitt. *Bhagavadgita Manuscript Illustrations*, *Journal of The Indian Society of Oriental Art*, New Series, Vol. XX and XXI, p.26.
15. See Edgerton. *The Bhagavadgītā*, Reprinted, Harper and Row Publishers, New York, 1964, p.97. n.7 (X)
16. See Illustration 1 in Appendix.
17. See Illustration 2
18. See Stephan Hillyer Levitt. An Illustrated Bhagavadgītā from Nagpur in *Lalit Kala* 24 (1990) 70-2.
19. MTN. Adhyāya 2, pp.42 Udupi Vādirāja Granthamālā, 1952.
20. See his commentary on MTN. Adhyāya 2.
21. *Rāmāyana*, 1-2-11
22. *Kundamālā*, 1.6

23. See correct reading of a passage in the *Kundamālā*, Adyar Library Bulletin, 16, III - 2 and also Dr.K.K.Raja "Textual Studies and Editorial problems in Theory and Practice" *Annals of Oriental Research*, University of Madras, Vol. XXVI, 1976. p.9 .
24. A.K. Warder, *Indian Kavya Literature*, Vol. I. Delhi, 1972, pp. 235-36.
25. *Vishveshvaranda Indological Journal*, Vol XXI, pts i-ii (1983), pp. 6,8 and 18.
26. *Ibid.*
27. For more details see *Raghuvamśsa prakāśikā* of Aruṇagirinātha. A study (unpublished thesis) by the present writer.
28. *Raghuvamśsa*, V. 46; *Śailopamaḥ śaivalamañjarīṇām jālāni karṣannurasā sa pascāt.*
29. For more details see the article by the present writer in Adyar Library Bulletin, 1990, p. 104-105.
30. Gaut Dh.S.14-38; Vas 4-12.
31. *Asvgr* IV. 4, 2,5.
32. *Kāmasūtra*, 4.1-37
33. See Adyar Library Bulletin, 1990, p.108.
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35. See Appendix.
36. Ajay Mitra Shastri, India as seen in the *Kuṭṭanimata* of Damodaragupta, Delhi, 1975.
37. See Sunit Mukherjee, *Some Positions on A Literary History of India*, CIIL, Mysore, 1981, pp. 18-19.
38. K.T.Pandurangi, *op. cit.* p.7
39. *Ibid.*

APPENDIX
PROFORMA FOR PREPARING CATALOGUE OF MANUSCRIPTS

Serial No. and Subject	Library Accession or Collection number if any	Title of work	Name of Author	Name of commentator	Material or substance	Script	Size number of folios or leaves; lines per page and no. of letters per line	Extent	Condition and age	Additional particulars
1	2	3	4	5	6	7	8	9	10	11

Palm-Leaf Manuscripts in Sanskrit (Available outside India)

K. Kunjunni Raja

India's literary and cultural heritage is vast. Most of it is preserved in Manuscripts in India and abroad. They cover a vast field of literature, both pure and scientific, and the documents come to millions. Only a portion of this big iceberg is visible. The other part has yet to be discovered.

For more than two centuries India was a colony of Britain. The rulers could collect and transfer to England anything they wanted without any obstacle. As a result, the manuscript collection in U.K. is the most important both in size and quality. The three major collections are the British Museum Collection and the India Office Collection in London and Bodleian Collection, Oxford. Most of them have been properly catalogued by competent scholars and descriptive catalogues are available. The Royal Asiatic Society in Britain contains 465 manuscripts which have been catalogued and more than 3,000 manuscripts are yet to be catalogued. Bodleian Library, Oxford, contains one thousand eight hundred and thirty nine manuscripts got through by Maxmuller memorial fund. Cambridge University contains more than two thousand manuscripts. The collections of the manuscripts in the Wellcome Institute, London for the history of Medicine is very important. But it was not known for a long time. The initiative for the collection came from Sir Henry Wellcome (1853-1936). The collection contains manuscripts, books, illustrations and various interesting objects. Among manuscripts those of Indian medicine (Ayurveda) are important. But Mss related to the fields of Tantra, Yoga, Lexicography, Alchemy and Astral science are also available here.

When I was working in the School of Oriental and African Studies, London, under Prof. Brough on "Indian theories of meaning", Dr. V. Ragavan came there on a project for the survey of Indian Manuscripts. He wrote to me that the Wellcome Institute might contain more than hundred manuscripts and wanted me to look at the collection. When I went there I found that there were about fifty boxes full of manuscripts. When Dr. V. Ragavan came we had a quick look at the manuscripts and identified a few thousands. This was in 1954. It was the stepping stone for further study of the collection.

In 1971 Prof. D. Pingree of Brown University began compiling a draft catalogue the *Jyōtisa* (Astrological, Astronomical and Mathematical) manuscripts in the collection starting with Dr. Ragavan's list. About a thousand titles have been described and included in Pingree's *Census of the exact sciences in Sanskrit*. Dr. Dominik Wujastyk has been preparing a detailed list of the collection as the first step for the descriptive catalogue. The first volume of a projected six volume descriptive catalogue was published in 1985. And the second volume is about to come. Importance is given to Indian medical literature. It may be noted that there are 54 Tamil palm-leaf manuscripts.

Current active work is being done for preparing descriptive catalogue of manuscript collections at Oxford. Some scholars come there and work for some time according to their convenience. Dr. K.P. Aithal who was formerly in the Adyar Library Research Centre and now at Heildalberg in Germany, Dr. Colas and Mrs. Usha Colas, (France) are among those who are helping in the Oxford project.

Formerly the India Office collection and the British Museum collection were in their own separate buildings. Now all the two manuscript collections are located in a new building constructed on the banks of the Thames. Among the collections of the India Office are one long roll of gold sheet and one of silver sheet containing the documents of 16th or 17th century entered into between the Zamorin of Calicut and the Dutch. Both are in Malayalam language script. In 1954 I copied the gold document.

There are many minor collections of Indian manuscripts in U.K. For details see the Bibliography Vol. I (Revised) of the *New Catalogus Catalogorum*, Madras University (1966).

Germany:

Among European countries Germany took a leading part in Indological studies. More than 15,000 manuscripts are deposited in about ten Institutions in Germany. *Königliche Bibliothek* (Preussische Staatsbibliothek) in Berlin has about 4,660 manuscripts. *Universitätsbibliothek* at Leipzig has about 1,389. Bonn, Marburg, Hamburg, Munich and a few other centres also have Sanskrit manuscripts. More than a hundred eminent German scholars have worked in all branches of Sanskrit studies. Most of the manuscripts have been described fully by scholars. Prominent among them are Aufrecht, Bühler, Weber and Kielhorn. There are more than four thousand un-catalogued manuscripts at Hamburg, Göttingen, Stuttgart, Tübingen and Munich.

The Nepal collections of manuscripts are now at Berlin in microfilm print. The importance of this collection at Kathmandu was known much earlier. Two descriptive catalogues describing 1,130 manuscripts were published in 1905 and 1915.

After India got independence Prof. C. Kunhan Raja, Madras University, visited Nepal to have first hand information about the manuscripts. Later Dr. V. Ragavan, Dr. Kapila Vatsyayan and C.R. Swaminathan visited the Library. The American scholars and the Government wanted to acquire microfilms of the whole set. But the Nepal Government was not willing to give away their collection. Later the German scholars supported by their Government went to Nepal. They wanted to microfilm the entire set, and prepare the prints and were willing to leave the original micro film and one set of the prints to the Nepal Government freely, provided they got one set of prints. As a result they got one set of prints, which is now kept in Berlin and properly listed and catalogued. The copyright still remains with the Nepal Government. Now European and other scholars have access to this collection for their research.

A considerably larger project is the Nepal-German Manuscript Preservation Project, started in 1970 and run by the *Deutsche Morgenlandische Gesellschaft* (German Oriental Society) under the direction of Dr. W. Voigt. In the framework of this project, all manuscripts in Nepal of private and public property are to be systematically microfilmed. So far (i.e. 1977) as many as 60,000 manuscripts with about 2,500,000 pages from the National Archives and from private collections have been dealt with. Among them there are about 3,000 Buddhist manuscripts which, in addition to manuscripts whose textual quality is better than that of the manuscripts in the large collections of Cambridge, Calcutta, London, Paris and Tokyo include some works so far unknown.

Another important project in Germany is Cataloguing of Sanskrit Manuscripts kept in German Libraries and other collections, more than seven volumes referring to 60,000 manuscripts published by K.L. Janert and N.N. Potti. K.L. Janert also published a detailed list of all catalogues of collections of manuscripts.

France

France also took great interest in Sanskrit manuscripts and studies. *Bibliothèque nationale*, Paris and *Bibliothèque nationale*, Sorbonne are two important centres of Sanskrit in France. There are more than 3,000 manuscripts in France. While handing over the territory of Pondicherry to

the Indian Government, the Government of France presented an Institute of Indological Study in Pondicherry as a memorial to their relation with India. As a result of this two Institutions viz., French Institute of Indology and the School of Far East study were established. There are about 6,000 manuscripts at these two Institutions. Sylvan Levi, Renoau and Filliozat are some of the eminent French Indologists.

When I visited Paris in '80, Dr. Colas who had been a student in the Sanskrit Department of the Madras University and who was then working at the *Bibliothèque nationale*, Paris, invited me to visit that Institute. More than a dozen Palm-leaf manuscripts written in Malayalam script and left as unidentified were brought to me. I described them to him.

Italy

In Italy there are more than 800 manuscripts. In Sweden there are about 100 manuscripts at Upsala and Stockholm. In Denmark there are more than 200 manuscripts at Copenhagen; the Royal Library at Copenhagen has more than 1000 manuscripts un-catalogued.

Russia has nearly 1000 manuscripts which have been catalogued.

Tibet

Rahul Sankrityayana was able to collect 663 Sanskrit manuscripts during his searches in 1935, 1937 & 1978. They are deposited in Patna. Some of the important texts have been published by him like *Pramānavārttika* and commentaries. Many Sanskrit books which are lost in India are preserved in Tibetan translation written from 1669 to 1706 A.D. Recently the International Institute of Buddhist Studies, Toyoko has published (1993) *Location List for the Texts in the Microfiche Edition of the Phug brag Kanjur* compiled from the Microfiche Edition and *Jampa Samten's Descriptive Catalogue* by Helmut Eimer.

The manuscript of the Tibetan Kanjur written some time between A.D. 1669 and 1706 in the West Tibetan monastery of Phug brag is one of the most valuable treasures housed in the Library of Tibetan works & Archives (LTWA), Dharamsala. In 1987 the Tibetan authorities entered on a joint venture with the Institute for Advanced Studies of World Religions (IASWR), New York. The aim was to prepare a microfilm edition of the Phug brag Kanjur and to make it accessible to scholars worldwide. Jampa Samten, the then Chief Librarian of the manuscript section in the LTWA,

assisted by Lobsang Shastri, was responsible for the microfilming in Dharamsala.

When Tibet was occupied by China many Buddhist scholars came out to India, Europe and other places carrying with them as many manuscripts as possible. They were welcomed by young scholars who were thrilled at the prospects of studying Tibetan version of Indian texts from traditional scholars. Now there are more than a dozen serious scholars in Tibetan Buddhism engaged in editing and restoring lost Sanskrit texts - Hahn, Lindtner, Jampasampa Helmut Eimer.

Japanese scholars also are active in the field.

Pakistan

Pakistan was part of India and a big collection of Sanskrit manuscripts are in Punjab, now in Pakistan. At the time of partition Hindu refugees running away to India carried along with their luggage a few manuscripts also at the call of Prof. Viswabandhu who was later able to collect them in India. This forms the nucleus of the collection at Hoshirpur (VVRI).

Ceylon

A large number of Pali, Sanskrit and Sinhalese manuscripts are preserved in Colombo museum. Descriptive Catalogues are available.

Japan

There are many Indian manuscripts in Japan, many remain un-catalogued. A student of mine Mrs. Kalpakam Sankaranarayana was in Japan last year and one of her projects was to make a survey of the Sanskrit Manuscripts.

America

A list of Indian manuscripts in U.S.A. and Canada was prepared by H.I. Poleman and published in American Oriental series No.12 in 1938 A.D. Besides the collection of manuscripts in Libraries etc. there are many collections with individual scholars. Daniel Smith of Syracuse University, New York has almost a complete collection of manuscripts dealing with Vaiṣṇava - Āgamas. Most of them are paper transcripts and micro-films.

Prof. A.N. Aklujkar of British Columbia University who has been working on Bhartrhari has an exhaustive collection of copies of all manuscripts pertaining to *Vākyapadīya* and its commentaries.

A.K. Wardar, Toronto University, who has published Volumes of *The History of Indian Literature* has also a good collection of rare and important manuscripts. Prof. Venkatachari of the same University has also copies of many Sanskrit manuscripts.

In Germany and some other Universities the system is for a Professor of a University to have his own collection of books and manuscripts in the field of his research. So when a Professor leaves one University and goes to another, he carries his own individual collection. Thus scholars like M.Hahn, Lindtner etc. have their own collections. Similarly Prof. Staal of Berkley University, U.S.A. has not only microfilms and copies of manuscripts but also audio and visual cassettes of the ancient Vedic texts as they are preserved in various parts of India through oral traditions. Prof. Asko Parpola of Finland has also several such records including those pertaining to the gāminīyaśākhā of Sāmavedins in Kerala.

Manuscripts are generally considered in the west as primary sources of research, especially in preparing critical editions of texts etc. But in India primary importance has been given to oral tradition. Even in cases where written texts are available, preference is given to oral tradition. When Dr. E.R. Sree Krishna Sarma prepared the critical edition of "*Kausitaki Brāhmaṇa*" at Köln (Germany), though he used many manuscripts he was primarily depending on the oral tradition, preserved by Erkara Raman Namputhiri who was then in his eighties. Even in my own edition of the "*Tantra Samuccaya*" for the Indira Gandhi National Centre for the Arts, I am using the oral tradition preserved by the teachers in Kerala for deciding the final readings.

The relative importance of the various manuscripts available for a text is a subject for a special study in textual criticism. The first attempt at collection of all available information about Sanskrit and allied texts was made by Aufrecht. In 1935 A.D. the Madras University decided to prepare and publish a complete and up-to-date '*New Catalogus Catalogorum*'. Prof. S. Kuppaswami Sasthri was the first Editor in Chief of the Project. In 1938 A.D. the work was transferred to the Sanskrit department with Prof. C. Kunhan Raja as the editor. The first volume dealing with 'a' was published in 1949. Then Dr. V. Ragavan became the editor. The second volume was published in 1966. Dr. V. Ragavan also published a revised edition of Volume 2. I joined the project as Associate Editor and published Volumes III, IV & V with Dr. V. Ragavan in 1967,

1968 & 1969. After his retirement I became the editor and published Volumes VI, VII, VIII, IX and X in 1971, 73,74,77 & 78.

Three more volumes have been published by my successor, Dr. N. Veezinathan, seven or eight volumes more have yet to be published to complete the project.

Indira Gandhi National Centre for the Arts under Dr. Kapila Vatsyayan has a project for microfilming all manuscripts in Sanskrit and allied literature which have some bearing on culture in the widest sense of the term. The work is progressing satisfactorily. They are getting co-operation and help not only in India, but from most foreign Institutions also. The aim is to keep them at a Central place, New Delhi, to help scholars in their research work, without affecting the copyright of the owners of the collections.

Last month I had a letter from Prof. Janert of Köln saying that his family collection of Sanskrit manuscripts, including transcripts, contains about 4500 manuscripts, and that now it is available for 'a reasonable' price. He says that it is provided with a pointable catalogue, ready for print, in 'absolute Janert quality of cataloguing'. Daniel Smith of Syracuse University, New York, has already published a catalogue of his collection of manuscripts (including transcripts). Similar collections may be found elsewhere also. (Prof. Janert died in 1995)

This is only a general survey; dependable and exact information about manuscripts is possible only after full description is available. We are even now discovering new collections both in India and abroad.

Pali Manuscripts in India - A Desideratum

C.S.Upasak

Pali is one of the ancient Indian languages of India in which the 'Words of Buddha', the *Tipitaka* and its ancillary works like *Atthakathās*, *Tīkāś*, *Anutīkāś*, *Madhutīkāś* etc. are compiled. There are some other works on Grammar, Rhetoric, History etc. in this language. As a matter of fact the ancient name of this language is 'Māgadhi' as mentioned in some ancient Pali texts.¹ The whole literature in this language is stupendous in size and pertains to a number of philosophical and spiritual themes including some on Sādhana or Vipassanā. The Pali literature as a whole is regarded traditionally as sacred scriptures by the Buddhist population living in the Theravāda countries like Sri Lanka, Thailand, Burma (Maramma Desa) Cambodia and also in some parts of Bangladesh.

Although Pali (or Māgadhi) originated and prospered in India, it is a deplorable fact that its study and development got extinct centuries ago. The literary activities in Pali got shifted to Theravāda countries, particularly Burma and Sri Lanka. And hence no manuscript of Pali is available in this country.

It may be recalled, as the records tend to show, that the 'Words of Lord Buddha' were originally collected and compiled for the first time soon after the demise or Mahāparinibbāna of Tathagata, Gautama Buddha. It is recorded in several ancient Pali texts that four months after the demise of the Master the eminent saint-disciples of Him felt the exegesis of the main Sermons delivered by the Satthā during his life time for forty five years at different places from Aṅga-Magadha in the east to Kuru Pañcāla in the west of North India. They decided to collect all the main *Suttas* (or sermons) of the Master dealing with *Dhamma* (philosophical and ethical norm) and *Vinaya* (or monastic disciplinary code) so that His 'Words' may endure long and no misgivings could creep into His original teachings. With this aim in view some five hundred learned saint-disciples of Lord Buddha who had already witnessed him earlier assembled at Rājagaha (Mod, Rajgir in Nalanda District, Bihar), the then capital of Magadha country. Ajātasattu, the then Magadhan king and erstwhile lay-disciple of Lord Buddha provided all the arrangements for their meeting. This is known as the 'First Buddhist Council'. In this Council all the important *Suttas* or

sermons of Lord Buddha and his enactments for the Buddhist Order (Saṅgha) were compiled (probably written?) and the language used was Māgadhi or Pali. They have been handed down with utmost authenticity till to-day, as believed by the Buddhists throughout the whole Pali-Asian countries.

Again, one hundred years after the Mahāparinibbāna of Lord Buddha there arose dissensions amongst the Fraternity of the Buddhist Order on some ecclesiastical matters, usually described as Ten Points (*Dasa Vatthūni*). In order to weed out the misgivings in the Buddhist Saṅgha the Second Buddhist Council was held at Vesālī (in Bihar State). It is recorded in some ancient Buddhist texts that a revision of the monastic rules was conducted; and as a result a large number of monks who did not agree to the decisions taken in the Council were removed from the Buddhist Order. It is also said that those expelled from the Saṅgha were very large in number and hence called '*Mahāsāṅghika*' by others and they formed another group which became equally powerful in later ages.

Further it is recorded in some later Pali texts written in Sri Lanka like the *Dipavamsa* and the *Mahāvamsa* that another Buddhist Council, usually known as the Third Buddhist Council was convened at Pāṭaliputta (Mod. Patna, Capital of Bihar State) during the reign of the Great Buddhist Emperor Ashoka (269-232 B.C.), some 230 years after the demise of Lord Buddha. It is said that this Council was held to dispel all the erroneous views that had crept in the original teachings of the Tathāgata. On this occasion, as the tradition goes to suggest, all the 'wrong views' contrary to the original Buddha's teachings were thrashed out and an authentic version of the 'Words of Buddha' usually called the '*Tipitaka*' or the 'Three Baskets' containing *Sutta*, *Vinaya* and *Abhidhamma* was finally prepared. A compendium on *Abhidhamma* called *Kathāvatthū* created by the President of this Council, Moggaliputta Tissa was also inserted in the *Tipitaka* considering it as important and authentic as the 'Words of the Buddha'. It may be mentioned that traditionally the same Pali *Tipitaka* has been handed down till to-day in all the Theravāda Pali Asian countries like Sri Lanka, Thailand, Burma, Cambodia and Bangle Desha, of course with some minor alterations, mainly on account of linguistic effects.

Further it is said that Fourth and Fifth Buddhist councils were also held in Sri Lanka in succeeding periods during 5th and 8th centuries A.D. in which the old version of the Pali *Tipitaka* was rendered into writing and that had been preserved till to-day with full authenticity and sacrosanct in the Pali-Asian Countries. For centuries primarily in Sri Lanka a large number of Commentarial literature on the 'Words of Buddha' or *Tipitaka* was produced by the number of Buddhist Pali Scholiasts like Buddha

Ghosa, Buddhadatta etc., the former being most erudite as he has been credited with compiling the largest number of Commentaries or *Atthakathas*. He has been not only a great Pali doyen of his time but also a Buddhist saint and produced an important Pali treatise on Buddhist practice of spirituality or the *Vipassanā* entitled '*Visuddhimagga*' or 'Path of Purification'. As in Sri Lanka so also in Burma a number of Pali Buddhist monk scholars wrote a large number of sub-commentaries, or *Tīkā*s, sub-sub-commentaries or *Anutīkā*s on the *Atthakathās* already written by earlier monk-scholars on the Pali *Tipitaka*. Similarly an important Pali text entitled the '*Milinda-panho*' or the 'Question of Milinda' was compiled in about 1st century B.C., which contains philosophical interrogation between the Greek King Meander and the great Buddhist saint and scholar Thera Nagasena. It is an excellent Pali text which explains all the Buddhist philosophic intricacies that may crop up in the mind of a non-Buddhist scholar. Its importance and integrity can easily be affirmed by the fact that in later days this treatise was included as one of the texts of the *Tipitaka* in Burma. Besides these treatises there are some works on Pali Grammar produced in olden days, the most notably known being *Kaccānavyākaraṇa* and *Moggallāna-vyākaraṇa*. Some texts on Pali rhetoric are also available.

Since long the writing of texts in Pali has been practiced in almost all the Pali-Asian countries and even in the modern time new editions of *Tipitaka* and its ancillary works have come in print in the respective countries in their own scripts. In 1956, 2500th Buddha's Mahāparinibbāna Anniversary was celebrated by the Government of India and also by some other Buddhist countries. To commemorate this sacred occasion under the patronage of Govt. of India, the Nava Nalanda Mahavihara, Nalanda published the Pali *Tipitaka* in 41 Volumes in Dēvanāgarī script under the editorship of great Pali scholar, Bhikkhu J.Kashyap. The Burmese Government celebrated the occasion in a grand scale. A separate Department was established and a convention called 'Chatṭha Saṅgāyana' or 'Sixth Buddhist Council' was held to bring out the authentic edition of the Pali *Tipitaka* and order Pali Commentaries, sub-Commentaries etc. In this Buddhist Council almost all the Pali monk-scholars from all over the Pali-Asian countries were invited. The Chatṭha Saṅgāyana Department still functions and has published all the Pali works including the *Tipitaka* in Burmese script in print. The editions were prepared on the basis of the palm-leaf manuscripts available in Burma, Thailand, Sri Lanka and Cambodia.

We have given above a brief survey of the compilation of the 'Words of Buddha' in Pali and its other traditional Pali works written from time to time during succeeding periods in Pali Theravāda countries. Although almost all the Pali works are presently available in print, the palm-leaf manuscripts of these ancient texts are still preserved in several Buddhist monasteries which people use on certain religious ceremonial functions. In India, Buddhism and Buddhist traditions came to a fatal close by the advent of Islamic rule, sometime in 10th century A.D. The Muslim invasions created havoc indulging in all sorts of vandalism. They not only demolished the Buddhist temples and monastic establishments and massacred the Buddhist monks residing there but also razed to the ground the libraries containing hundreds and thousands of manuscripts containing ancient Buddhist scriptures written in Pali and Buddhist-Sanskrit. This was an irreparable cultural loss to the nation as all the valuable treasure was burnt to ashes. It was a major setback for the Buddhist learning throughout the country. It is indeed a deplorable fact that presently no manuscript could be hunted out in the country. It was a major catastrophe that the country ever witnessed throughout its history.

However in some remote areas, particularly in the hilly regions where Islamic fanaticism reached rather late some Buddhist establishment could get themselves spared from the boisterously fatal consequences; and some of them could still survive. Some of these old monasteries presently adhere to *Mahāyāna Buddhism* and many follow the Tibetan form of the religion. In these monasteries we can find numerous old manuscripts but mostly in Tibetan language and some in Buddhist Sanskrit language. It may be mentioned that there are some Buddhist monasteries in West Bengal, Assam, Nagaland, Mizoram, Tripura and Sikkim which belong to *Pali Theravāda Buddhism*. There is a good population of Buddhists who belong to this group even to-day. We cannot however claim, at least at this stage, to know their original period of existence. Some of these tribal Pali Theravādi monasteries follow the Burmese traditions including the Burmese script in which they hold the Pali texts, particularly in manuscript form, while some in some regions belong to Thai traditions and speak and use Thai script and speak corrupt Thai tongue. All these groups of population obviously migrated either from Burma or from Thailand. These Buddhist monasteries do possess some old Pali manuscripts in Palm-leaves written in Burmese or Thai scripts. It may also be a matter of interest to mention here that in Bengal, particularly near the border of Bangladesh there are some Theravādi Buddhist groups, mostly tribals, who traditionally adhere to ancient *Pali Theravāda Buddhism* and we may find Pali manuscripts in Palm-leaf written in ancient Kutila or Bangla scripts. In those

monasteries the Pali studies are still flourishing and some run Pali colleges where erudite Pali scholars still live as Buddhist monks and teach Pali to the masses. It is a matter of much pity that no person or agency undertook the task to make a survey of these Pali centres and to explore the manuscripts available there. It is indeed high time we organised a team of scholars well versed in Pali language and also conversant with Thai, Burmese, Bengali and Kuṭṭila *akṣaras*. We are confident that if we make a thorough exploration in a scientific and systematic manner, it is beyond doubt that we can find numerous ancient manuscripts preserved in those Buddhist monasteries which were established centuries back.

As a matter of fact in the libraries of the universities, particularly, of oriental learning such as Sampooran and Sanskrit University, Varanasi where hundreds of old manuscripts are preserved, no Pali manuscript is available. I am told that there is only one fragmentary manuscript in Sinhalese script of modern time. So is the case with the Nava Nalanda Mahavihara, (a Post-graduate and Research Institute for Pali and Buddhist Studies), Nalanda (Bihar) where no ancient Pali manuscript in Indian script is available. We have, however, received information from the Librarian of Nava Nalanda Mahavihara about three old palm-leaf Pali manuscripts, out of which only one is complete while the other two are fragmentary. The complete palm-leaf manuscript in Pali is that of the famous ancient Pali text, the *Visuddhimaggo*. It is written in old Sinhalese script, containing some 269 palm-leaves. Neither the date of scribing of the text nor the name of the scribe could be made available. The date of script of the text could be ascertained only after examining the text. It may be recalled that the *Visuddhimaggo*, a Pali text of 5th century A.D. was written by Buddha Ghosa, a great Pali scholastic of the Past in Sri Lanka; and presently the text is available in many scripts including Dēvanāgarī. Its translation is also available in English entitled 'Path of Purification' and also in Hindi and many other languages. The other two manuscripts at Nalanda are scribed in palm-leaves in old Burmese script. One of them is written by lac and gold in embossing manner. Obviously this is the fragment of the *Kammavācā*, the Pali text of the *Vinayapitaka* which pertains to *Pabbajjā* (ordination) and *Upasampadā* (higher ordination) ceremonies for initiating a person to monkshood. Altogether there are 16 leaves. No mention of the scribe or the date of scribing is available. The other fragmentary palm-leaf Pali manuscript is also written in old Burmese script in some leaves. This manuscript is inscribed by pen and as usual made black with herbal ink. It contains some Pali yataka stories, though not properly deciphered. All these three palm-leaf Mss. are yet to be properly deciphered and edited. Since they are well - known Pali texts, perhaps no

scholar ventured to handle them for editing. But the texts may be of some importance with regard to their paleography and also technique.

Our Suggestion

I may be permitted to suggest that a team of Pali scholars should come forward to take up the task of conducting a thorough survey of all the Buddhist monasteries belonging to *Pali Theravāda Buddhism* which are presently situated in Bengal, Assam and in some North-Eastern states. By this survey we can get a good number of old manuscripts in Pali preserved there. Such a venture is bound to be fruitful and we are confident that we may unearth a large number of Pali manuscripts, still unknown to us. It may be mentioned that a similar project is well formalised and good work is being done in Buddhist Sanskrit manuscripts at Central Institute for Higher Tibetan Studies, Sarnath (Varanasi). This Institute has a Department for retrieving the old Buddhist Sanskrit manuscripts available in the Himalayan hilly regions extending from Kinnaur (Himachala Pradesh) to Sikkim. Many old Sanskrit Buddhist Manuscripts have been deciphered and published in Dēvanāgarī script and a number of such Buddhist Sanskrit manuscripts procured by this Institute await final decipherment and publication. In the same manner we can collect Pali manuscripts and can bring to light if and when we venture to take up this scholarly project.

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1. Cf. *SāMāgadhi mūla bhāsā Sambuddhā cāpi bhāsara*, i.e. Māgadhi is that original language in which all the Buddha have preached. *Kaccāna Vyākaraṇa*.

Modi Documents in Tamilnadu

R. Vivekanandagopal

Manuscriptology is a developing field in which textual criticism of manuscripts is an important one. In South India, the manuscripts are in two forms viz, the palm-leaf and the paper. Most of the manuscripts upto 15th century were in palm-leaf and later paper was introduced for writing literary as well as other works.

Marathi language was written in Dēvanāgarī and Modi scripts on stone, copper plate, palm-leaf and paper. The Modi script was an official script, for writing the political, economic and administrative records of the Maratha rulers of Maharashtra and the Maratha rulers who ruled over other parts of India.

This paper deals with the Modi documents available in the various Record offices and Libraries of Tamilnadu which are all paper manuscripts and written during 18th and 19th centuries. The normal size of the Modi manuscript is 9×27 sq. cms., sometimes the size varies to 18×27 sq. cms., or 21×31 sq. cms and the ratio of the size is 1:3 or 2:3.

Meaning of 'Modi'

The necessity of a short-hand script was felt by Hemadpant, the Record officer of Ramadev Yadav of Devagiri during 13th century and was so developed and practised by the descendants of Yadavas and subsequently by the Marathas. However, literary works in Marathi continued to be written only in Dēvanāgarī scripts or otherwise called Balabodh.

The word "MODI" originated from the Marathi word "MOD" which means "to break". By way of breaking the Dēvanāgarī script this script was developed as a short-hand for speedy writing. (Valambe, M.R., 1983, p.351).

When India was brought under the Moghul rule, Persian was the court language. Two types of scripts were in practice for Persian language viz, 'Naskha' and 'Shikasta'. The 'Naskha' script was familiar to the common people, whereas the 'Shikasta' script of speedy writing was used by persons related to political affairs. This was similar to a short-hand script of now-a-days. The word 'Shikasta' itself means 'to break'. So, after

seeing the usage of 'Shikasta' script in Persian, Hemadpant (1260-1309 A.D.) developed Modi script by breaking the Dēvanāgarī script for speedy writing (Padhye, K.A., 1931, p. 275-76).

Method of Writing

The method of writing Modi script is entirely different from Dēvanāgarī. In Modi, there is no difference between long and short scripts. As the writing is a continuous one, no gap is given in between words. It is read according to the sense. The clusters have no place in Modi writing. In some places, clusters are used as in Dēvanāgarī writing. Modi does not have a different set of numerals. The same numerals for Marathi are used. Short forms or abbreviations are frequently used in the documents to save time while writing.

Normally the Modi letter starts with 'Shri' (श्री) or the name of the family deity or at times both. At the right hand corner, the total number of pages of the letter are used to be mentioned. If the letter was addressed to an honourable person, the name of that person would be written over the line or at the end of that particular line and the space where the name had to be written was left blank.

The emblem of the ruler is normally placed at the top of the letter or in the left corner of the letter below two or three lines from the beginning. There is another seal scribed as 'Mortab Sud' or 'Lekhan Seema' or 'Maryadeya Virajate' which means 'the end of writing' placed at the end of the letter. There was no habit of putting the signature at the end. Instead of that, the last one or two lines were written by the ruler's own hand writing who sent the letter. But in Thanjavur they had adopted a system of placing their title at the end i.e 'Sri Rama Pratap' in Dēvanāgarī. But after the influence of the British, letters of the 19th century are seen with the signature of the persons either in Modi or in Dēvanāgarī.

Four types of dating were used in Modi documents.

1. Arabic or Suhur year
2. Hijari year
3. Phasali year, and
4. Shalivahana year

With the help of Ephimeris these years may be converted into Christian years.

Style or Writing:

The method of Modi writing is classified into four periods according to the style. They are

1. Pre-Shivaji period
2. Shivaji period
3. Peshwa period, and
4. British period

The documents of pre-Shivaji period are very difficult to read and understand, as the usage of Persian words is frequent. Further the style itself differs. This type of documents is available in the Bharat Itihas Samsodhak Mandal at Pune. During the period of Shivaji, Persian words were not allowed in Documents. Instead of that, Sanskrit words were coined and used. But the style of writing remains the same. The Documents of Peshwa period and British period are easy to read and understand.

But the style of Modi writing in South India is slightly different from the Modi in Maharashtra proper. Archaic Modi is not quite so easy to read; even the Marathi language in South India is somewhat Tamilised. The number of people, who can do justice to Archaic Modi is not so high (Ethiraj. A.J, 1983, p.7).

The influence of Tamil language over Marathi is prevalent. Tamil words found in the Marathi language are of three types:

1. Words in daily usage - ūliam pāliam
2. Technical terms - kavalai, palliyarai
3. Marathinised words - Motyātilkuppa, Iruppāpaiki

Apart from these words, local place names and personal names are also seen in Thanjavur Modi documents.

History of The Collection of Modi Documents

When the Maratha ruler King Serbhoji II signed an agreement in October 1799 with the British, the Royal court Records were also handed over to the British Agency established at Thanjavur. The Agency Archives are also mixed up with a number of Records pertaining to the old Maratha administration of the territory (*Indian Archives* Vol. v, 1951, p.75). The Records contained some papers and cadjans of general public and historic importance!

In 1855, the Thanjavur country was annexed to the British, under the rule "Doctrine of Lapse". The Queen Kamakshiamma Baisaheb with the other Queens claimed the right of Kingdom. She appealed to the Highcourt through an English Lawyer B. Norton and the case went on. By that time, the Modi documents with the British Agency were brought to the court for examining the position. A commissioner was appointed for classifying them and making suggestions about their division between the parties as per the courts' decree. In his report, he suggested to the court that, with the consent of the parties to the suit, these records might be handed over to the Sarasvati Mahal Library where they would be useful not only to the parties, but also to the general public and scholars doing research. The court was pleased to accept the suggestion (Admns. Report 1926-27, p.4). But the records were kept in the Palace Building.

The preservation and classification of these original documents was considered to be of great importance by the Indian Historical Records Commission which met at Gwalior in December 1929 under the Presidency of Sir Frank Noyce.

In 1930, Mr R S Shelvankar, a Research fellow from the University of Madras, worked on 27 bundles of Modi documents which were received from the District Judge of Thanjavur in 1929. Mr Shelvankar had done the work with commendable accuracy and judgement and he submitted a report on the contents of the twenty seven bundles accompanied by illustrative extracts and translations to the Patna session of the Indian Historical Records Commission in December 1930. Shri K Krishna Row Bhonsle also read a paper on these documents in the same conference (Admn. Report 1930-31, p.2).

The Indian Historical Records Commission which met at Indore in 1946 passed a resolution that the Modi documents should be kept only in Sarasvati Mahal Library and recommended to the state government to release funds for preserving, classifying and cataloguing them.

In 1950, the Government of India, decided to hand over the Archival collection known as 'Tanjore Raj Records' to the Government of Madras housed in the Tanjore Palace Building. This decision was based on the recommendation of the committee of experts appointed in July, 1950 to advise the Government regarding the location, preservation, and utilization of the records (*Indian Archives* Vol.V, 1951, p.75) since Sarasvati Mahal was not a Government body at that time.

So, Major Narayana Balakrishna Katre was appointed to classify the Modi Records. He started his work on 1-2-52 and stopped on 30-4-52. Again this work was started from 1-10-52 and completed on 31-5-53. The eleven

month work gave a complete study of Modi documents of Thanjavur and this work is called 'classification of 1952' (Ethiraj, A.J., 1983, pp. 14-17).

Major N.B. Katre classified them into eight divisions, viz,

1. Marathi Manuscripts in Nagari and Modi script
2. Urdu and Tamil Manuscripts
3. English Agency Records before 1900 A.D.
4. Bound volumes of Marathi, Tamil and English Records
5. Sketches and Maps,
6. Printed books, lists etc,
7. Office Records
8. Modern English Records between 1900-1948.

Further he separated some bundles and marked them as 'papers for destruction'. These bundles were transferred to the Sarasvati Mahal Library. The above classified document Nos. 1 to 6 were sent to the Tamilnadu Archives on 16-11-53 and the document Nos. 7,8 were taken to the Thanjavur Collector's Office.

In 1959, the Government ordered the Collector of Thanjavur to send the Modi documents to the Tamilnadu Archives for the preservation work. Accordingly 80 bundles and 6 bound volumes were sent to the Archives. The 6 bound volumes only were repaired and returned to Thanjavur. The 80 bundles of Modi were retained there for classification. During 1960-62 an expert in Modi classified only 44 bundles and the work stopped due to his inability.

Later in 1973, the Government agreed to appoint two Modi Scribes and they were appointed on 27-07-1973. The Modi Pundit in the Sarasvati Mahal Library supervised the work. A total number of 120 bundles were classified and written in 59 long size notebooks. These are preserved in the Library till date.

Distribution of Modi Documents

Thanjavur was the capital of Maratha Country and the land extended upto Chidambaram in the North, Trichy and Pudukottai in the West, Ramanathapuram in the South, and the Bay of Bengal in the East. So Modi documents are also available in these areas and stored in the District Record Centres of Ramanathapuram, Madurai, Trichy, Coimbatore and Cuddalore apart from Thanjavur.

The total Modi bundles available in the Palace building were 1473, including 311 bound volumes and 21 palm-leaf bundles. After the 1952 classification, 173 bundles and 258 bound volumes of Modi were taken to Tamilnadu Archives, where the number of bundles were increased to 253 by adding 80 bundles received from the Thanjavur collectorate. These 253 bundles and 258 bound volumes of Modi are recently transferred to Tamil University, Thanjavur for research and publication.

Now the Sarasvati Mahal has preserved 863 Modi bundles including a few bound volumes. The Thanjavur District Collector's Office possesses 237 bundles and 53 bound volumes of Modi documents. These were also transferred from the Palace building in 1953.

When the author visited the District Record Centres at Ramanathapuram, Madurai, Trichy, Coimbatore and Cuddalore to conduct a survey of Modi documents, he found a total number of 310 bundles in those offices which was later confirmed by the letter received from the Commissioner of Archives, Government of Tamilnadu, Madras. (D.O.Lr. No. 11353/Pr.1/94 dt 22-12-1994).

The Ramanathapuram collector's office has 13 bundles and the Madurai District Record Centre has 17 bundles of Modi documents which deal with Land Revenues of Ramanathapuram, Srivilliputtur, Tirunelveli and Sivaganga areas, Munsiff and Civil Court dealings and Devasthanam Records.

In Trichy, there are 153 bundles of Modi documents dealing with Paimayesh accounts of Trichy, Ariyalur, Turaiyur and Dindigul Taluks, Devadayam lands, Thotti Inams and a few records related to Coimbatore district.

120 bundles are available at Coimbatore District Record Centre, which deal with Collectorate Records of Coimbatore and Darapuram, land tax collections, Inam land distributions, Devadayam of Erode taluk, procession of Elephants, etc., These records were embossed with the seal "Collector of Coimbatore".

20 bundles of documents related to Srotriam lands, Paimayesh accounts, Temple inams of Dindivanam, Arcot Government are available at Cuddalore District Record Centre. These records have the seal of Hanumantraai Uttarkarrai. All the documents available in the four District Record Centres belong to the period from 1806 A.D. to 1850 A.D., i.e., the reign of Serbhoji II and Shivaji II in Thanjavur. So the total Modi bundles available in Tamilnadu are 1717 and 311 bound volumes. All of these

bundles should be collected in a particular place for translation and research. It is learnt that the Government of Tamilnadu recently has issued an order to Tamil University for transferring all the bundles stored in the District Record Centres to Tamil University.

Catalogues Available

There is no systematic preparation of catalogues for the Modi documents available in various places of Tamilnadu. The first of its kind was prepared by Major N.B. Katre in 1952 and it is seen in the Sarasvati Mahal Library and Tamil University. The information given in that catalogue is not enough. Serial number, Bundle number, Contents of the bundle in a word or sentence and the year of the document were given in that catalogue. This catalogue is divided into three parts, viz

- a. papers to be preserved
- b. papers to be preserved as samples
- c. papers for destruction.

The documents 'A' and 'B' are recently transferred to the Tamil University and the documents 'C' are preserved well in the Sarasvati Mahal Library.

The lists, indices prepared from time to time are incomplete in nature and seen in the Tamilnadu Archives. They are not useful because the arrangement of documents is reshuffled everytime and it is difficult to trace the document as per the list.

Now every letter is given a number within the sub-bundle and the sub-bundles get together a bundle. While transcribing the documents, this number is noted against each letter and there is no chance of missing any document.

Published and Unpublished Documents

The Modi documents are not yet published collectively. Sample documents were translated and published in the first book '*A Report on the Modi Manuscripts in the Sarasvati Mahal Library*' by R.S.Shelvankar in 1930. He took the first step in publishing the Modi documents of Thanjavur. Later in 1983, *The Modi Documents from Tanjore in Danish Collections* were published by Elizabeth Strandberg in West Germany. This work adopted the methodology of Manuscript Editing perfectly.

The Tamil University published 3 volumes of Tamil translation of Modi documents in 1989. Neither the original Modi documents nor the transcription in Nagari were included in these volumes. So it is difficult to compare the original document with the translation if necessary.

Now, the Sarasvathi Mahal is going to publish its first volume of Modi documents in which the original Modi documents, transcription in Dēvanāgarī and the translation of the documents in Tamil will be given. Apart from this, a Glossary and a list of abbreviation will also be included.

The unpublished Modi documents are arranged in Sub-bundles and bundles. Each bundle consists of 50 or more sub-bundles and each sub-bundle consists of 100 or more letters. Now, the sub-bundles are covered with hand-made board and arranged in the order and bundled with cloth. The Bundles are rearranged according to the Serial number.

Preservation

The Modi documents in the Sarasvati Mahal Library are preserved by using various methods of preservation.

1. The traditional method used in the library for preservation was keeping small bundles of powder mixture of the following. This acts as insect repellent.
 - a. Bark of Cinnaman
 - b. Black Cumin
 - c. Black Pepper
 - e. Sweet flag, and
 - f. Camphor
2. The modern methods used are as follows:
 - a. dusting of bundles by vacuum cleaner
 - b. fumigating the bundle by keeping them in the fumigation chamber. Thymol (antifungal) and Para Dichloro Benzene (insecticide) are used in the fumigation chamber.
 - c. Naphthalene balls or NIFOL are placed in the cup-boards where Modi documents are shelved.
 - d. Racks are arranged in such a manner that they get good lighting and ventilation. This helps to prevent the moisture in the bundles.
 - e.

Repairing of damaged or brittle documents are done by the method of mending or tissue paper lamination.

Subject Description of The Documents

Nevertheless we cannot neglect the Modi documents which are the indigenous main source of evidence available to trace the political, economic, cultural and administrative history of Thanjavur region for over 180 years as well as the cultural relation/contacts between Maharashtra and Tamilnadu. The following subjects are traced from the Modi documents:

- a. Matters relating to the border of Thanjavur Country, divisions, army, invasion of foreigners and agreements.
- b. The nature of the work in the main administrative departments of the Marathas.
- c. Social history of Thanjavur like the position of Society, Education, position of Women, economic condition, etc.
- d. Choultry administration, religious activities.
- e. Police administration, types of courts, punishments etc.
- f. Arts and crafts developed in Thanjavur.
- g. Details about Indian and foreign coins available in the treasury of the Maratha Kings.
- h. Boat building and ship building yards of the Marathas.
- i. Detailed prescriptions of medicines for various diseases of men, birds and animals which were used in the palace.
- j. Annual yield of the lands in various villages in the state.

Conclusion

Since 1676, Thanjavur had been ruled by eleven Maratha Kings and their reign ended in 1855 A.D. They had left diaries, letters, accounts, land revenue, day-to-day events, etc., recorded only in Modi script. The history, position, condition, cataloguing system and translation of Modi documents are analysed in this paper. Historians who are interested in the South Indian History must go through these documents and may fill up the gaps in the history of Tamilnadu with enormous sources collected from these documents.

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Sāñcipāt Manuscripts

Biswanarayan Shastri

With the invention of the art of writing the letters were inscribed on perishable materials and engraved on durable materials. Of the perishable materials used for writing from the earliest time, mention may be made of animal skin, papyrus, palm-leaves, *bhurjapatra* (birch), *sāñcipāt* (bark of Aloe tree), *tulāpāt* (papers made of cotton) and a few others. Letters and symbols were engraved on clay, later on dried under the sun or by fire, stones, plate of copper and other metals, wood etc.

Usually coloured liquid was used for scribing on palm-leaf and such other materials. Pen made of iron, quill of bird, of reeds, spine of porcupine etc. was used for writing. The pen was chosen depending on the surface of the writing materials. The colour of ink was usually black or red. The colour of ink remained intact and fresh for hundreds of years. It was distinct from the writing materials and it presented a new colour and hence, it was called *varṇa* (script). Letters engraved on durable materials such as wood, stone, copper plates etc., lasted thousands of years and were considered everlasting, and therefore, called *akṣara*, meaning imperishable.

Varṇa and *akṣara* indicate that both the methods of scribing and engraving were in vogue since the advent of the art of writing in India, and other parts of the civilised world. While scribing on palm-leaf or *sāñcipāt* the scribe is advised as to follow certain prescribed rules as to the size and shape of the letters and also the top-line.

The letter should be of equal size and shape with the head at the same level, while letters in a word should be compact and with space in between two words.

samāni sama-śiṛṣāni ghanāni viralāni ca.

The scholarly people used to preserve manuscripts with great care and considered them as their proud possessions. They made all efforts to preserve the manuscripts free from moisture, due to humidity, ants and white ants and fungus. Usually a manuscript of *sāñcipāt* is covered by two wooden sheets and bound by a thick coloured thread. Occasionally *sāñcipāt* manuscripts were wrapped with the skin of big lizards.

Manuscripts are kept in a basket placed on a small ceiling hanging from the inside roof and fire is lit below in the evening for boiling water etc. (not for cooking meal). The smoke that emerged from such fire not only kept the manuscripts in a dry condition but drove away insects, ants, and white ants and rats also.

North Eastern India comprising ancient Kāmarūpa (Assam) and Gauda-Baṅga (Bengal) and some of its adjoining regions did not use palm leaves for writing manuscripts because palm trees were not abundant or not grown at all in this part of the country. For this reason the people searched for other materials of writing and discovered the bark of *āguru* or *Kālāguru* trees.

People of this region in ancient and mediaeval times mainly used the bark of *āguru* tree (Aloe tree) and *bhūrja patra* for writing *bijamantra*. It may not be out of place to describe the method of preparing folios from the *Sāñci* bark. *Sāñci* is a kind of tall tree usually grown in the hilly areas known as *āguru* or *kālāguru* in Sanskrit (Aloe trees). Kālidāsa describes the land of Kāmarūpa abundant with *Kālāguru*. The *Mārkaṇḍeya purāṇa* also refers to Kāmarūpa as a hilly region covered with *kālāguru* forest. Barks of *āguru* tree were collected from the forest and cut into desired sizes in length and breadth and sliced on both sides with a sharp weapon, a dye made of indigenous herbs was applied. This was followed by the process of making the folios smooth by constantly rubbing the surface by a piece of granite stone. Again a new layer of dye was spread on both sides of a folio and the folios were made glass-smooth by rubbing them for hours together with a *ghilā* (round shaped dry fruit of wild bean). Thereafter, all the folios were put together and cut precisely to the same size in length and breadth.

A *sāñci* leaf was cut into varied sizes, 2 to 6 c.m. in breadth and 6 to 20 c.m. in length. The ink used for writing was prepared from different ingredients. Paints of different colours were also prepared for illustrations. Letters and paintings remain fresh even after hundreds of years.

It is interesting to note that the scribe took utmost care to make every line precisely of the same length, even if the vowel *ā* (secondary form of the vowel *ā* - *kāra*) makes a line longer in length the same was put in the second line without a consonant. Around *nābhi* nearly one c.m. was left out uniformly. The pen used in Assam for writing manuscript was made of iron or reeds, quill of birds and spine of porcupine. There was the strict injunction not to copy a manuscript by any unauthorised person. If one flouted this injunction one was bound to suffer in hell. The restriction

was insisted on the one hand in their anxiety to preserve the knowledge handed down generation after generation to them, and on the other, to prevent the manuscript from falling into the hands of persons who were not eligible to handle such writings or who were unscrupulous.

However, there were certain trained persons, who used to copy manuscripts for scholarly persons in consideration of payment.

The manuscripts were considered most valuable for the following reasons:

1. Good manuscripts were confined in the Royal treasury, or in the possession of scholarly persons or of a temple authority.
2. These were not easily available for copying.
3. Copying was prohibited and restricted.
4. Materials for writing manuscripts were costly and were not easily available.
5. Usually scholarly persons avoided the pain of copying manuscript and usually second grade persons were given the job of scribing.

Taking into consideration the hardship in scribing, the scribe appeals to his successors and fellow-scholars in heart-rending words:

*bhagna - prstha - kati - grīvah stabdh -dr̥stiradhomukhsh
kastena likhito granthahyatinena paripālyatām.*

(Looking downward and constantly fixing my eyes on the lines, I copied this manuscript taking great pain and in the process, I had almost broken my buttocks and backbone, kindly preserve this with great care.)

The Process of preparation of *sāñci-pāt* is a time consuming laborious one and in course of time, say from early nineteenth century indigenously made *tulāpāt* (paper made of cotton) replaced *sāñci-pāt* and later on by the mill-made paper. With the substitution of *sāñcipāt* by *tulāpāt* the art of calligraphy declined considerably; less and less care was taken by the scribe in writing and also in preparing the ink.

It is to be noted that paints of different colours were prepared for illustration of themes. The illustrations were not in black and white, but multi-coloured.

Even when a manuscript is not illustrated the borders of the folios are decorated with red and golden colours. Gold like dusts were spread on fresh writing and the colour appeared golden.

Now with the change of time the old method and practice disappeared. Manuscripts were just like food stuff in stores, racks and other places, and as a result they are damaged and are in the process of being damaged. Institutes like Kāmarūpa Anusandhana Samiti started collecting manuscripts from individuals and Vaiṣṇava monasteries in the second decade of the twentieth century and preserved in the Samiti's library. However, some of them were transferred to the State museum and other Govt. Institutes, while a majority of them are in Samiti's library. For proper preservation air conditioned rooms are necessary with timely spray of chemicals. This is hampered for want of funds.

There are still hundreds of manuscripts with individuals. Proper documentation of these manuscripts has not yet been systematically done. Documentation, preparing photostat and microfilming of all the manuscripts scattered all over the State is a must, which brooks no delay.

Descriptive catalogues of manuscripts collected and preserved in three main manuscript - libraries of the State, Kāmarūpa Anusandhāna Samiti, Guwahati, Kāmarūpa Sanskrita-Sanjivani Sabhā and Pūrva - Bhārati, Nalbari are published. No catalogue or simple list of manuscripts in the possession of individuals has yet been prepared.

An exhaustive survey of manuscripts of the North-East region is to be conducted by an expert-team of the Govt. of India.

Techniques of Conservation of Palm-leaf Manuscripts: Ancient and Modern

N. Harinarayana

Introduction

The purport of this Seminar is to focus our attention on Palm-leaf manuscripts as cultural treasures that are in imminent need of being valued for what they are, studied and preserved. Few palm-leaf manuscripts are illustrated or illuminated. This lack of the painted picture or decoration in them diminishes their value as art objects, and they are not accorded all that consideration bestowed on art pieces. I have noticed in an exhibition palm-leaf manuscripts heaped together on a table in a corner. Quite often, they are kept bundled haphazardly in an almirah. They are casually handled when they are to be read or sorted out. Perhaps many of them lie uncategorised, untouched, uncleaned, uncared for, the material of the manuscripts breaking down in the unfavourable conditions of their upkeep.

Not that there has been no awareness at all of their importance as cultural treasures that bring to us the great writings of the past. There had been traditional methods of keeping them in good condition. The manuscripts were accorded the status of sacred objects, which fact automatically ensured that they were looked after with a certain deference and according to certain prescriptions. It is not definite how effective these prescriptions were, but it is possible that having been handed down the generations mostly by word of mouth, these prescriptions suffered subtle changes which affected their effectiveness.

It is difficult to gather information on these traditional methods because of the vagueness which surrounds them. Moreover people had been following them by sheer force of habit and may not have stopped to think of the why and the wherefore of the processes employed. Still it is worth recapulating whatever is known of these age-old methods.

Ancient methods of preservation

The traditional notions of preservation of palm-leaf covered all aspects of the material. Palm leaf was studied and categorised into (1) the country variety (2) the refined variety. The characteristics of the country variety

are that the leaf is narrow, thick and has veins running in it. The leaves of the refined variety are wide, long and with veins that are flexible. In order to prevent prolonged neglect of the manuscripts, it has been ordained that they should be taken out at least on Vijayadasami Day, cleaned and kept back. If at any time, the palm leaves are dampened by rain, they have to be dried in the shade. The annual ritual also involved applying a paste of cocoanut leaf juice (*Coccinia Indica*) and wood charcoal (wiping it away after five minutes with a clean cloth) or just turmeric. The former paste was applied to the country variety of the palm and the latter to the refined variety. After allowing the paste to remain on the leaf for five minutes, it is wiped away with a clean cloth. This coating may be intended to strengthen the leaf and make it proof against insect or fungal attack. In storage, palm-leaf manuscripts are always wrapped in white cloth dipped in turmeric water and dried. The bundle is always secured with a silk or cotton thread. Exposure of the palm leaf to the tender rays of the rising sun or the setting sun was also possibly to destroy traces of the growth of insects or micro-organisms. The leaves are arranged or strung together with the help of a needle made of bamboo and a string of silk or cotton. Two flat pieces of wood were placed at the top and the bottom of the bundle and tied together. This prevents the edges of the leaves from being chipped by abrasion. The bundles of manuscripts were kept in heavy wooden chests which would reduce the rigours of the changing climate. Along with the bundles, pieces of *vasambu* or dried ginger were kept for repelling insects. Neem leaves were also kept with the manuscripts to protect them against insects and such neem leaves are to be renewed every week. Coatings of lemon-grass oil were given to strengthen the leaves and destroy growths of micro-organisms or insects.

The broad lines of these traditional practices were laid down as injunctions to be followed strictly. The possible purpose of these injunctions is to be only guessed as has been done above. This is what separates the modern approach to the conservation of palm-leaf manuscripts from the traditional practice. At present, the reasons for the various types of deterioration that affect palm leaf are investigated systematically and steps are taken to counter their action. This is a continuous process, and when a better process comes along or a more suitable chemical emerges, the older method or chemical gives way to the better and later one.

The use of palm leaf as a writing surface is an ingenious idea of the Indian mind. It was quite an antique idea, but there is no clue as to how antique it is! O.P. Agrawal states that the earliest palm-leaf manuscript is a "fragment of the text of a 2nd Century Indian drama, discovered in

Central Asia". He is also of the view that "there are no extant palm leaf manuscripts in India from before the 10th century". All large museums of the State and Central Governments and all libraries of Oriental research institutes have collections of palm-leaf manuscripts. Some collections are exceptionally large and important like those of the Oriental Research Institute of Baroda, the Khuda Baksh Library at Patna, the B.J. Institute of Learning and Research, Ahmedabad, the Saraswati Mahal Library in Thanjavur, the Oriental Manuscripts Library in Madras and the Adyar Library in Madras. Similarly the National Archives of India and all the State Archives have collections of palm leaf manuscripts which do not get much prominence *vis-a-vis* their records of governmental transactions. Even district museums have fair collections of these manuscripts received from local citizens. There are, I think, still large untapped sources of manuscripts in private hands, in rural households and in religious institutions.

Palm-leaf manuscripts are also known to come from Nepal, Sri Lanka, Burma, Thailand, Indonesia and Cambodia. "For several centuries, it remained by far the most important writing support", according to Agrawal.

It is easily evident that the task of conserving palm-leaf manuscripts is enormous, given the existence of such large collections spread over a vast area. Palm leaf is a material of organic origin and is susceptible to quick deterioration once the condition of its upkeep becomes unfavourable. In right conditions of being cared for, it is capable of surviving for a long time. If we are to preserve it, we must know the physical and chemical structure of palm leaf, the factors adverse to its well-being and the methods of countering them.

Palm leaf: its features and preparation

The palm leaves used for writing are of two kinds: those drawn from the palmyra palm (*Borassus flabellifer* Linn) and those drawn from the talipot or fan palm (*Corypha umbraculifera* Linn). They are also called *tala* and *sritala* respectively.

The palmyra grows to a height of 15 to 20 metres. Its leaves are rather thick and coarse and are suitable only for writing with a stylus. The talipot palm is taller and goes upto a height of 20 to 25 metres and has a thinner trunk than the palmyra. Its leaves are thin and flexible and light-coloured. Writing is done with carbon ink on these leaves. These talipot leaves resist damage and decay better than those of the palmyra tree.

The palm leaves used for manuscripts are generally 15 inches to 35 inches long and $1\frac{1}{2}$ to $2\frac{1}{2}$ inches wide. The leaves are cut to the size required. The preparation of the leaves varies from place to place. In some places, fresh palm leaves are dried in the shade and then coated with gingely oil to make them smooth. In other places, tender palm leaves are cut and hung in the kitchen to expose them to the smoke from the ovens. After sufficient exposure, the leaves are cleaned and used. In Orissa, turmeric paste is applied to such leaves before being used for writing. Another method consists of drying the leaves and then boiling them in water which helps in removing any growths on them. The dried leaves are then smoothened and their surface rubbed with gingely oil. Agrawal points out how in Thailand the palm leaves are dried and cut to size and then processed in a kiln designed for the purpose. A black oil which exudes from the leaves during this processing in the kiln is wiped off with a cloth. After the leaves are held over an open fire for a while, they are polished. This processing is said to help in the preservation of the leaves.

In India, the prepared leaves are used straightaway without any coating. If any coating is given, it is that of turmeric. Lacquering of the leaves is however done in Thailand. It may be black or red lacquer or black or blue dyes. White ink was used for writing on coloured leaves.

Writing on palm leaf is done either with a stylus or a brush or pen. In the former case, the letters are incised on the leaf and then made distinct by being rubbed with a paste of carbon and gingely oil. This is the more common method of writing on palm leaf, especially so for the thick and coarse leaves of the *tala* variety. There are two methods of incising letters on the leaf: to keep the stylus in a fixed position and move the leaf or to move the stylus on a firmly-held leaf. Writing with a brush or pen is done as on paper. The simple ink used is made of carbon black mixed with gingely oil. A more elaborately prepared ink consists of the juices of two plants, turmeric, black ashes of cocoanut or straw and gingely oil. This ink is stated to have some preservative effect.

In illustrated palm leaf manuscripts, the painting or decoration was either incised with a stylus or painted with a brush. Incised illustrations were filled in with black colour or red in some cases. Those done with a brush or pen could be depicted in a wider colour range, usually yellow, red, blue, green, white and black.

After the writing is done, the leaves were kept in position by punching a hole in the middle of the leaf in the case of small leaves or holes at both ends in the case of big leaves and by passing a string through

the holes. The bound bundle of palm leaves is covered on both sides with wooden boards which are slightly larger than the leaves. These boards were sometimes painted or decorated and were also provided with holes in the same position as on the leaves and bound in place by the string passing through the holes on the leaves.

The manuscript thus bound and secured was kept wrapped in a white or coloured cloth to keep off dust.

The physical and chemical characteristics of palm leaves

The durability of the palm leaves thus prepared for manuscripts depends on their physical and chemical characteristics. The leaves of the *tala* variety are a bit thick and coarse and more liable to brittleness than the *sritala* variety which are thin and flexible. The application of gingely oil and turmeric at various stages of their preparation gives them a certain capacity to endure rough handling and physical damage. Chemically speaking, palm leaf is made of cellulose along with gum, resins, essential oil and pigments. Cellulose is a higher polymeric sugar and quite stable chemically. It can only be broken up by oxygen and the ultra-violet radiation from sunlight acting in conjunction, but since the leaves are kept wrapped in cloth and inside boxes, this may not be a serious problem. But the essential oil in the palm leaf may evaporate in course of time, and this may lead to loss of suppleness and ultimately to brittleness. Being materials of organic origin, palm leaves are liable to total decomposition induced either by the break-up of its cellulose constituent or by insects and micro-organisms thriving on it as their nutrient. A little care will avert much of the damage, and the palm leaf will endure interminably.

Causes of deterioration of palm leaf manuscripts

For all that has been said above about the physical and chemical stability of palm leaf, manuscripts made of them have come down to us in various states of damage depending on the conditions in which they had been kept. Now that we are seized with the problem of preserving them and averting the onset of such damage, it is necessary that we know the causes of deterioration of these manuscripts.

(1) Atmospheric factors

Temperature and humidity of the atmosphere around it have a great effect on palm leaf. As a material of organic origin, palm leaf stays best in equable conditions of temperature and humidity which are around 20 to 22°C and 45 to 55% relative humidity. Conditions other than these induce

different types of deterioration. High temperature usually accompanied by low humidity causes dryness in the leaves, and the essential oil in the leaf evaporate. Consequently, the leaves become hard and brittle. There may occur cleavage of the surface layer of the leaf. High humidity — which means wet conditions as in the rainy season — may cause the leaves to stick together.

(2) Attack by living organisms

Atmospheric conditions — especially damp conditions — are responsible for living organisms flourishing and damaging them. One tiny insect that feeds on palm leaf and can eat its way through bundles of manuscripts is *Gastallus indicus*. Termites may also affect palm leaf manuscripts. Outbreaks of greenish black fungus may also occur on palm leaf when the humidity is high.

(3) Physical wear and tear

Handling of manuscripts for use results in physical wear and tear at the holes through which pass the strings holding the leaves and at the edges of the leaves themselves. Leaves which have become fragile due to dryness brought on by prolonged neglect are particularly prone to damage at the edges while being handled.

(4) Stains and discolouration

Palm-leaf manuscripts get stained owing to careless handling, bad storage in which insects freely go over them, contact with water, and fungal attack. Discolouration also affects palm leaves, especially near the edges. In such a case, the leaf turns brown or black all along the edges. This is attributed to the oxidation of the material of the leaf.

(5) Fading and erasure of writing

In the case of palm-leaf manuscripts in which the writing had been done by incision with a stylus and subsequent rubbing in of carbon, it is usual for the carbon to fall off in course of time, and the writing to look faint. Even in the case of manuscripts where writing had been done with a pen or brush, the deposit of carbon particles forming the written words may fall off, and this is a more serious matter since there may not be any impression of the written words left. In the case of incised texts, the writing could be recovered through rubbing with a carbon paste.

(6) Dust

Dust is a serious hazard to palm-leaf manuscripts as it is to all museum objects. Prolonged neglect and poor storage would result in the accumulation of dust on manuscripts. Dust has a way of creeping into rooms, showcases and almirahs through all openings and gaps available. If it is not removed and is allowed to accumulate, it can become caked up in moist conditions and the seat of the growth of micro-organisms. Dust itself may carry reactive salts. The deposition of dust, apart from its dangers of being converted into dirt and the seat of the growth of micro-organisms, is in itself a sign of neglect and renders the palm-leaf manuscript unpresentable.

These are the main hazards affecting the durability of palm-leaf manuscripts, and a knowledge of these hazards reinforces our ability to tackle the hazards and save the manuscripts from their damaging effect. It is to be noted that old manuscripts might have suffered from one or more of these hazards, making their preservation a complex process. So whenever a palm leaf manuscript is taken up for preservatory treatment, it has to be thoroughly examined and a detailed record of its condition made.

Examination of manuscript

There are proformas available for the record of the examination of a palm-leaf manuscript to be prepared. Appendix 3 of the book by O.P. Agrawal is an example of such a proforma. Obviously details to be noted first would pertain to the title of the manuscript, its catalogue number if any, its date, the language of its writing. These details are required for identifying the manuscript at any time.

Next to be noted are the measurements of the manuscript and of its protective wooden covers, the number of leaves in the manuscript, their colour, the type of writing done: whether incised or surface written, the presence of decoration of any type; whether painting or lacquering.

Then the details of the deterioration undergone by the manuscript are also recorded. This would include the deposition of dust, the stains present, the discolouration of the leaves, signs of insect attack and fungal growth, whether the leaves are brittle and fragile, whether there is fading or loss of ink. Based on a study of these facts of deterioration, the treatment proposed to be given to the manuscript would be drawn up and set down on the proforma. There is space on the proforma for recording the details of the actual treatment given.

Photographic record of the manuscript before and after treatment is also to be prepared and enclosed with the proforma.

The preparation of the proforma is an important step in the treatment for the conservation of a manuscript in the modern day. The conservation treatment to be given will proceed in several steps from the simplest to the more complicated and skilled ones. It will be rounded off by the application of a protective coating to the object against further attacks of destructive agencies.

The basic premise of conservation is that the utmost will be done to keep up the antique nature of the object; that additions of new material or removal of original material would be kept to the absolute minimum; whatever is done or applied to the object should be capable of being reversed or undone if at a later date, it is found that a better method or a better material for conservation has emerged. Moreover in the application of chemicals for treatment, one always proceeds from the simplest to the complex, from the least drastic to the powerful chemical reagents. Least intervention is the cardinal principle of conservation at present.

Conservation procedures for palm-leaf manuscripts

Each type of deterioration undergone by the palm-leaf manuscript calls for a specific type of damage, the treatment of the whole manuscript will call for a composite of processes for the several types of damages undergone, all applied in the appropriate order to be totally effective. Conservation procedures suggested for each type of deterioration are detailed below.

(a) Removal of dust

Preliminary cleaning of the leaves of the manuscript is an important prerequisite for all subsequent procedures of treatment to be applied. This cleaning invariably involves the removal of dust which might have been deposited all over the manuscript. If it is a manuscript of incised writing, cleaning is done with a clean piece of cloth dampened with water to which a little non-ionic wetting agent like Teepol is added. If the condition of the leaf is good, it can be immersed in such water for the dust to be removed. Then the leaf can be pressed between two sheets of filter paper for the excess water to be absorbed. Or the leaf may be air-dried by being suspended from a string strung across the room.

If the dust is to be wiped off with a dampened cloth, the solution to be used is one of glycerine in water (1:10) or a mixture of glycerine and rectified spirits.

The removal of dust from manuscripts with writing in ink has to be carried out with non-aqueous solvents. Ethanol and 1,1,1 trichloromethane are the two solvents recommended for this purpose. Before starting the treatment with the solvent, a test has to be made to see if the solvent would affect the ink or pigments. The removal of dust is done by immersing the palm leaf in a tray of the solvent. The leaf may be rubbed with a soft brush inside the solvent in the tray to loosen the dust and let it go away.

If a leaf is sticky due to excessive application of gingely oil, it can be wiped clean with a soft cloth, moistened with acetone.

(b) Fumigation

Fumigation is a very important conservation measure to be taken in respect of all museum objects which are of organic origin like palm leaf. The purpose of fumigation is the destruction of all traces of micro-organisms like larvae, spores, fungal growths etc. It is desirable that all palm-leaf manuscripts are subjected to fumigation before further conservation treatment is begun. In the case of manuscripts showing signs of insect attack or fungal growth, fumigation is a must.

There are separate fumigants for countering insect attacks and fungal growth. Paradichlorobenzene is a good insect repellent as well and thymol is a good fungicide. An airtight fumigation chamber with perforated shelves and glass doors and an arrangement in the middle of the bottom for heating thymol crystals with the help of a 40-watt bulb could be used equally for fumigating manuscripts against insects and fungi. A mixture of equal volumes of carbon tetrachloride and trichloroethane is also useful against insects. The fumigant should be kept on the shelf to enable its heavier-than-air fumes to move down and fumigate the manuscripts on the shelves.

The duration of fumigation would depend on the condition of the manuscript and the extent of attack suffered by it from insects or fungus. Normally fumigation in the fumigation chamber may last for a week. In the case of paradichlorobenzene, the optimum quantity of the fumigant has been found to be 1.5kg. for a cubic metre of space of the fumigation chamber. This has to be repeated after 21 days to kill new larvae hatched from insect eggs on the manuscripts.

(c) Separation of leaves sticking together

There are cases of leaves of a manuscript sticking together. This may be attributed to several reasons: exposure to humid conditions including dampening in rain water. Separating the leaves in such a case becomes a delicate problem requiring patience and skill for resolving it. The leaves could be exposed to steam for moistening and loosening them. Once the leaves become moist, they would yield to separation with the help of a blunt spatula. An alternative method is to place the manuscript in a bath of hot water containing 5 to 10 cc of glycerine. This bath is to be changed every half an hour. After an hour, each leaf is lifted with a metal spatula, dried between blotting paper sheets and then cleaned.

(d) Filling up holes and broken edges on the leaves

Holes are formed on the leaves of palm-leaf manuscripts through insect attack. The holes may be big or small depending on the attacking insects and the intensity of their attack. The existence of these holes mars the appearance of the manuscripts. Small holes are filled in with the fibres of mulberry tissue paper. The fibres are teased out of strip of the paper placed on a glass sheet with the point of a knife or needle. These fibres are then mixed with an adhesive such as methyl cellulose. Then these fibres are taken on the point of a sharp instrument and filled into the holes and flattened with a spatula. Once all the holes in a leaf are filled, it is placed between two tissue papers and kept under a glass sheet.

Bigger holes or gaps may be filled in with unused palm leaf. A strip of the unused palm leaf equal in shape and size to the hole or the gap in the manuscript is cut out, the edges of the hole and the fresh piece are teased out and both are stuck together with polyvinyl acetate adhesive. Japanese tissue paper can also be used for filling up the holes.

(e) Restoring flexibility of the palm leaves

There is an element of flexibility in fresh palm leaf. This might be lost in old leaves which would then become stiff and show proneness to brittleness. Such leaves can be softened either by being immersed in glycerine or brushed with glycerine. This has a salutary effect on the strength of the leaf.

(f) Re-inking the writing

Faded or hardly legible letters on palm leaves are not uncommon. If they are *tala* leaves with the letters incised on them, reviving the writing is not difficult. A little lamp black is taken on a cotton swab and rubbed on the letters. Excess lampblack is removed with a soft cotton cloth and further cleaning done with an alcohol-glycerine mixture (1:1).

(g) Repair of brittle and fragile palm leaves

Palm leaves may become brittle and fragile due to prolonged neglect or due to insect attack which eats away large portions of the leaves. In such cases, it becomes difficult to handle the manuscript, and if left unrepaired, such a manuscript is certain to fall to pieces.

In such cases, it is necessary to consolidate the leaf with an additional support which would not affect the writing and would enable handling of the leaf without any risk of it falling apart. The supporting tissue could be fine chiffon or acid-free tissue paper. The adhesives to be used are either starch paste or carboxy methylcellulose or cellulose acetate sheet.

Before repairing work is started, the leaves are subjected carefully to removal of dust, fumigation and filling in of holes or gaps. Such leaves are then given a support of chiffon or tissue paper. The process of doing so is as follows:

(i) Using chiffon and starch paste or carboxy methyl cellulose

The leaf to be repaired is kept on a waxed or oil paper spread on an even glass - or laminated-sheet-topped table. The chiffon sheet is cut to a size slightly larger than the size of the full leaf and is placed over the leaf. Then the paste which should be of a thin and uniform consistency is applied and is spread out starting from the middle and going outwards. Then the leaf and chiffon assembly is inverted, and another piece of chiffon of the same size is pasted on the other side. The whole sandwich of chiffon sheets and palm leaf is pressed together in a hand press for good adhesion and even surface. The sandwich is allowed to dry in air by being spread out on a table covered with oil paper.

(ii) Using tissue paper and cellulose acetate

This method is quick, more elegant and gives a good sandwich. In this case, the palm leaf is kept between a sheet of cellulose acetate on either side followed by a sheet of tissue paper on either side. Both these sheets are cut to a size larger than the palm leaf. This sandwich is placed on an oil paper spread on a glass-topped table. A wad of cotton dipped in acetone is pressed on one side of the sandwich and moved outwards from the centre in even strokes. By doing so, the acetone flows through the tissue paper, dissolves the cellulose acetate which fixes the palm leaf to the tissue paper. The process is repeated on the other side. The sandwich dries quickly and is then cut to the size of the original leaf.

Both these processes are called lamination. In the first process, the chiffon can be replaced by tissue paper. Chiffon makes for more durability, but good quality tissue paper also gives a good lamination. The second process is called solvent lamination. If the cellulose acetate sheet could be procured, this would enable faster work to be done because the laminated sandwich dries more quickly and the whole process can be carried out fast.

The choice of support for the brittle and damaged leaves is not limited to chiffon or tissue paper. It depends on the condition of leaves of the manuscript. In conserving an illustrated palm-leaf manuscript with writing and painting on one side, the National Research Laboratory for Conservation at Lucknow selected fresh and flexible palm leaves as support. Since two palm leaves do not stick well together, a sheet of Nepalese tissue paper was used as an intermediary since there was found good adhesion between Nepalese tissue paper and palm leaf.

With what has been stated above as basic procedures, the conservation of each damaged manuscript has to be charted out taking into consideration the individual features of each manuscript and of the damage undergone by it. Conservation is actually a lot of scientific processes and lot of skill and imagination and aesthetic taste, for the repaired manuscript must, at least at first glance, appear to be in pristine condition, the repair being so finely done and matched with the original adroitly.

Storage of manuscripts

All manuscripts may not require elaborate conservation treatment. But all of them would require basic cleaning and slight rearrangement and renewal of strings and binding cloth. The manuscript covers have to be treated if they have suffered damage. There are manuscript covers which have a great deal of artistic work on them, and these may also require conservation. Moreover dusting and fumigation may be required for the covers.

Cleaning and conservation treatment and repair do not complete the work of conservation of palm-leaf manuscripts. It is now that the equally responsible work of preventing recurrence of the problems of damage described earlier begins.

The important requirement of the continuous care of the manuscript is good storage. If the palm-leaf manuscripts are kept in ideal conditions of storage, the bulk of the problems of damage would be solved. The following are the characteristics of good storage: (a) The temperature and the relative humidity of the room in which the manuscripts are stored should be 20-22°C and 45-55% respectively.

(b) The leaves may be bundled and wrapped in coloured cloth and the bundles may be kept individually in an almirah with suitable clearance between shelves or in shallow drawers of a cupboard.

(c) The storage should be so designed that there should not be need to disturb other manuscripts while retrieving one.

(d) The manuscripts may be kept individually in cardboard boxes or cartons designed for the purpose. They may be of two or three standard sizes depending on the range of sizes of manuscripts in the collection.

(e) In the case of bundles or cartons, there should be provision for writing details of the manuscript, its title, its language, its size, its catalogue number.

(f) The manuscripts may be stored in order of catalogue number or according to any other system based on local conditions but designed to help in easy retrieval.

(g) The cupboard or the almirah in which the manuscripts are kept should have a clearance of at least 15 cms from the floor at the bottom. Suitable plastic cups may be kept under the legs of the almirah or the cupboard and filled to a quarter with some oil or Gammoxene powder to prevent access of insects into the almirah or the cupboard.

(h) Insect repellents like naphthalene or paradichloro benzene may be kept in the almirah or cupboard.

(i) The store room should have good air circulation. Exhaust fans may be fitted to ventilator openings in the rooms to take away regularly stale air in the room.

(j) Regular cleaning of the store room to free it of dust is essential. A vacuum cleaner may be used for removing dust from the room. Periodical dusting of the manuscripts is also desirable. I have noticed the availability of a small handy vacuum cleaner for removing dust from books and small objects. Such a vacuum cleaner will be handy for removing dust from the manuscripts especially from the edges.

(k) Access of direct sunlight into the store room should be avoided, for sunlight has a deleterious effect on palm leaf. Any windows existing in the room should be provided with glass which cuts off ultra-violet radiation.

What have been mentioned above are physical aspects of storage. Another important aspect of storage is a system of numbering and cataloguing the manuscripts. A system may be devised according to the subjects covered by the manuscripts in the collection, and the manuscripts may be arranged according to this system, which may include card-indexing of the manuscripts to facilitate easy retrieval according to our requirements.

Conclusion

Conservation of a palm leaf manuscript, which has been ravaged by time and neglect, is quite a task. It requires knowledge of materials, skill, patience and imagination. This is most true of the restoration part of conservation. As for the preservatory aspect, it is basic and consists of a few basic procedures, which — if enforced regularly — would go a long way in ensuring the durability of the manuscripts. These procedures have been indicated and stressed from time to time in this paper. To put it most simply, the basic requirement of conservation is good house-keeping. At the other end, conservation of the more complicated kind requires expertise. This could be obtained from established laboratories like the National Research Laboratory for Conservation, Lucknow, the Indian Conservation Institute of INTACH also at Lucknow, the Laboratory of the Government Museum, Madras, the Preservation Section of the State Archives, Madras and also of other state museums and archives.

What has been said in this paper is by way of introduction to the subject. It is indicative, not exhaustive. The work done so far in the field of the conservation of palm leaf manuscripts has itself been sporadic and localised. There is not enough detailed study of all problems in this field. A good deal of work could still be done to standardise the procedures for the conservation of palm leaf manuscripts and to make available the materials and equipment required for such conservation.

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Modern Techniques of Preservation and Conservation of Palm-leaf Manuscripts

Yashodara Joshi

1. Introduction

The exact period of history when man began the use of Palm leaf as a means to express his ideas and thoughts either in the form of paintings or writings is difficult to assign. A fragment of palm leaf manuscripts belonging to as early as 2nd century A.D. of an Indian Drama was discovered at Turfan in Central Asia. Some Palm leaf manuscript fragments belonging to 4th, 6th and 7th century A.D. have also been reported. Amongst which fragments from Kashghar, in the Godfrey collection and manuscripts written in Gupta script preserved in the monastery at Horiuzi in Japan are present. Some specimens of 7th century A.D. are reported to be available at Nepal.

Other prominent examples include *Panchami Kaha* written in 1052 A.D. and found in the Jnanabhandars at Jaisalmer. Pattan Manuscripts Bhandars in Gujarat houses *Nisitha Churni* of 1101 A.D. A few letters written to the rulers of Princely State in Eastern India in the first half of the 19th century are available at Victoria Memorial, Calcutta.

These manuscripts cover a large spectrum of subjects like philosophy, Music, Astrology, *Tantras*, *Nyaya*, *Vaidyam*, *Ganitam*, *Natya*, etc. The language of these manuscripts ranges from Kannada to Sanskrit and scripts from Dēvanāgarī to Telugu. The manuscripts are available in varied sizes ranging from 10 x 3.5 cm. to 90 x 3.5 cm.

2. Contributions in the field - A survey

B. Bhattacharya has described the process of seasoning used for Sritala leaves. Fresh leaves were dried in sun for 7 days and buried in mud for 3 months. White leaves thus acquired brown colour which were then kept in kitchen and exposed to smoke. They were cleaned, cut to required size and written upon. S. Chakravorti studied the writing on palm leaf and its physical properties. He observed that Tamil script was incised on palm leaf by a steel stylus and then inked with carbonaceous ink. He found the palm leaf to be four times stronger than good quality hand made paper. Loss of strength on accelerated ageing was found to be slight but

folding endurance was nil. It is a good material but its resistance to wear and tear and handling is poor.

Chakravorti found the use of para-dichloro benzene at 65% Relative Humidity (RH) for fumigation to be effective. It was also observed that in some cases when fumigation was carried out using killoptera, a mixture of ethylene dichloride and carbon tetrachloride, the writing gets smudged due to high absorption of these chemicals which are volatile in nature. This difficulty was overcome by Ranbir Kishore. He applied a protective coating of metha-methacrylate varnish on the leaf to protect water soluble writings from smudging. The chemical is available in the trade name of Bedacryl. Kishore further observed the harmful effect of unscientific methods of packing and storing and emphasised the need of storing the documents in congenial environmental conditions, i.e. temperature in the range 22-25°C and RH 50-60%. Suggestions for restoration of brittle leaves by different processes of repair, viz., tissue repair, chiffon repair, inlaying etc., were also recommended. Traditional methods of seasoning, writing and preservation of palm leaf manuscripts have been discussed by B.K. Padhi. C.B. Gupta analysed the causes of deterioration like physical, chemical and biological factors along with handling and storage of palm leaf manuscripts. Treatment of the leaves, separation of stuck up leaves, repair of damaged leaf and imparting flexibility to the leaf have also been taken into account. A new method for relaxing brittle palm leaves was given by M.V. Nair. Application of extracts of fresh palm leaves with some selected essential oils like Clove oil, Black pepper oil, Sandalwood oil etc. on brittle and fragile palm leaf was found to be encouraging.

The problem of restoration of flexibility was also investigated at National Archives of India by Rajendra Prasad. A mixture of polyethylene glycol-200, lemongrass oil and water in the proportion 1:4:20 gave satisfactory results.

Experiments on the use of a number of oils for regaining flexibility of brittle palm leaves were carried out by Suryawanshi, Nair and Sinha. Application of Camphor, Eucalyptus and Clove oil was found to be most reliable as these were more volatile, light and dry and are easily absorbed by parenchymatic cells of the leaf. Other oils like mustard, castor, etc. being more thick and viscous are not absorbed by the leaf easily and add more weight to the sample instead of flexibility.

P.K. Datta undertook conservation of palm leaf documents at the Victoria Memorial by fumigation, gaining flexibility, inking, joining the fragments, filling up the gaps and mending the tear. For regaining

flexibility a mixture of water Citronella oil (1:1) was agitated to obtain a milky white liquid, which was sprayed on the leaves when satisfactory results were obtained.

B.R. Joshi has discussed all the details of preparation of palm leaf, causes of deterioration, preservation techniques including regaining flexibility, fumigation, deacidification, storage conditions, remedial measures and repair of palm leaves.

3. Composition of Palm leaf manuscripts and Writing methods

Only two types of palm leaves have been used for writing purposes:

- a. *Corypha umbraculifera* Linn, commonly called *Sritala* or *Talipot* palm.
- b. *Borassus flabellifer* Linn, commonly called Palmyra palm or *Tala*.

Most of the manuscripts of ancient times have been written on *Sritala* leaf as observed by Hoernle, while the use of Palmyra palm began at a comparatively later period. Palmyra palm or *Tala* was brought to India from Africa. The original home of *Talipot* palm or *Sritala* is uncertain but it grows widely in South India, Ceylon and Malabar Coast.

Before writing, the surface of the leaves was seasoned and processed to make them suitable for writing. Textures of two types of leaves differ. Leaves of Palmyra palm or *Tala* are thick and coarse, while those of *Sritala* are thin, light coloured and flexible.

Various processing methods which differed from place to place were adopted to season the leaf. In some parts of South India, the leaves were dried and boiled in water. Any abnormal growth was then pared off with a knife. Gingili (*Til*) oil was rubbed to smoothen the surface for writing. In Orissa, the fresh and soft *Sritala* leaves cut from the tree were dried in the sun for several days and then buried in the mud, for three months. Then turmeric (*curcum a longa*) paste was applied on them. Exposing them to smoke in the kitchen for many days was also prevalent. These practices were considered as an effective measure to prevent insect attack. Different methods were used for writing on *tala* and *Sritala* leaves. Since *Sritala* leaves are thin and soft they can be used like paper. The leaves being absorbent, the writing is done in carbonaceous ink. *Tala* leaves are coarse, thick and non-absorbent in nature. They can only be written on by inscribing the characters using a pointed metal stylus. Characters may be inscribed either by moving the leaf beneath and keeping the stylus fixed as was prevalent in South India or vice versa as commonly done in Orissa.

The writings were then brightened up by rubbing them with lamp black or true indigo or charcoal powder. At some places rubbing of fresh green leaves, turmeric, vermilion, kumkum, blackashes was also prevalent.

4. Causes of deterioration

Palm leaf is a natural product and organic in nature. Like all organic products it is very susceptible to deterioration caused by changes in climatic conditions (i.e. temperature, relative humidity, light etc.) and bio-degradation. Various types of damages caused need to be looked into separately.

Hot and humid climate prevalent in tropical regions contributes to a great extent in deterioration of palm leaf manuscripts. Palm leaf contains lignin which is easily oxidised and hydrolysed in humid conditions. The products obtained are generally acidic in nature which alongwith atmospheric pollutants effect the fibrous bonds of the leaf, thus making it brittle. Besides, hot and humid climate promotes the growth of micro-organisms, like book worm, book lice, silverfish, fungus etc. Palm leaf when in the tree derives its composition from palm tree and likewise contains unmodified cellulose, sugars (in the form of glucosides), oils (unsaturated), black gum, resins, and is rich in green pigment, chlorophyll. While in the tree the palm leaf contains a lot of moisture which eventually dries up once the leaf is cut from the tree. This results in loss of flexibility of the palm leaf as also in pronounced reduction of its tensile strength and folding endurance. Several chemical changes in other components of the leaf also take place, which result in its embrittlement and yellowing.

The yellowing of palm leaf on ageing, though is basically due to decomposition of its green pigment, yet it could also be due to the basic structural changes in the alcoholic and poly saccharidic nature of unmodified cellulosic structure undergoing the following probable reactions.

Reactions characteristic of polyhydric alcohol are

- a. Formation of additional compounds, simple and more complex in nature e.g. with water and alkalis.
- b. Formation of compounds, comparable with alcoholates.
- c. Formation of esters and ethers.
- d. Oxidation of hydroxy groups to aldehyde and to carboxy group.

Reactions characteristic of the poly saccharides are

- a. Hydrolysis and acetolysis resulting in degradation to shorter chains, i.e. oligosaccharides, cellobiose and the end product glucose and their acetates.
- b. Oxidation causing cleavage of glycosidic linkages and resulting in shorter chains.

5. Traditional methods of preservation

In some of the manuscripts instructions are found written either on the title page or in the colophon regarding proper upkeep of the books. Traditional methods and techniques have continued till date as they have withstood the test of time and proven their usefulness.

Safe upkeep of manuscripts was ensured even before starting the writing on the leaf. Seasoning of the leaf by different methods was considered to have antiseptic effect. For the safe upkeep of manuscripts holes were punched on the leaf and cords were passed through them to keep the leaves together. These were then placed between stiff wooden boards having the same type of holes for passing the cord. Wooden boards press the leaves from both the sides and prevent curling of the same. They are generally wrapped in cloth coloured yellow or red. Red colour is believed to be insect repellent. Wrapping the manuscripts with cloth protects them from dust and also to a great extent from variation in atmospheric humidity and absorption of acidic fumes. Different types of leaves like Neem (*Azadirachta-Indica*), Pandri or ghorbachch (*Acorus calamus*), a kind of grass called Panadi, grown in Jaisalmer, leaves of 'Five leaved chaste tree', *Vites-Incisa*, *Vitex Nigundo* were kept with the manuscripts to keep the insects away. Turmeric paste which is believed to have germicidal properties was also used to be applied to the leaves.

Chemicals commonly used for eradication of insects are p-dichloro-benzene at 65% RH. Killoptera (Ethylene dichloride and carbon tetrachloride), carbon disulphide, camphor soln, Naphthalene bricks, gamaxene powder. For removal of fungus infection, fumigation with thymol vapours is generally practised.

6. Modern preservation techniques

- a. **Cleaning and Separation:** Cleaning of palm leaves when found to be covered with dust or any other foreign matter is the first requirement. Superficial dust is cleaned by a soft brush. The use of a mixture of glycerine: water in the ratio 1:10 and glycerine:alcohol in the ratio 1:1 is quite satisfactory for writing in ink which is not

washable in water. For palm leaves containing water soluble writing, the use of acetone, benzene or carbon tetrachloride has been successful. Separation of stuck-up palm leaf documents is effected by using the following methods:

- i. Stuck up leaves are placed in a humidification room or these are exposed to moisture. When they become sufficiently moist, each leaf is separated carefully by means of a blunt knife.
 - ii. Palm leaves are separated by placing them in a bath of hot water (60°C) containing 5-10% glycerine. After being soaked for an hour the individual leaf is separated.
 - iii. The palm leaves are also separated by immersing them in a bath of hot liquid paraffin (70-80°C) till they are completely soaked. Each leaf is separated carefully by blunt spatula and then washed with acetone.
- b. **Regaining of flexibility:** The loss of natural oil contents of palm leaf with the passage of time, makes the leaf dry, brittle and fragile. A number of methods have been tried and adopted to restore the flexibility of the dried and brittle leaves. A number of chemicals like citronella oil, camphor oil, glycerine, polyethylene glycol-200, lemon grass oil, eucalyptus oil, clove oil, saffrole oil etc. in combination with water and alcohol in different proportions have been tried and found effective in regaining flexibility.
- c. **Re-inking:** Since a black pigment (lamp black) is used to fill in and brighten the engraved characters, it is possible to restore the loss of writing by reinking. It is not possible to revive the writings of sritala palm leaves which had faded as it is generally by carbonaceous ink. For tala leaves, reinking is done by rubbing powdered graphite, lamp black or a mixture of citronella oil, alcohol and carbon black by means of a cotton swab and the engraved incisions are filled. The excess graphite or lamp black, left over the surface after the incisions have been filled in, is wiped and swept off with a clean and soft cotton cloth. To further brighten up the writings glycerine or diethylglycol may be rubbed over the leaves.
- d. **Reinforcement techniques:** Before any repair process is adopted preliminary restoration of damaged leaf like joining the fragments, filling up the gaps and mending the tears is required. Broken strips are joined together by pasting paper strips on unwritten side of the document. Large holes and gaps are repaired with another unused

plain palm leaf. A plain palm leaf is cut according to the shape and size of lacuna and fixed with 5% solution of polyvinyl acetone in toluene. Instead of palm leaf, paper backed wood veneer is also used. Small insect holes are filled up with paper pulp. Fibres of mulberry tissue paper along with an adhesive like diluted Mowicoll are also used to refill insect holes. Broken edges may be made up by using thick Japanese tissue paper. A thin layer of transparent acrylic emulsion adhesive may also be applied with a soft brush on the edges of the manuscripts.

This is followed by the repair process which may be chosen amongst the following:

- i. **Chiffon repair:** This process is useful for tala palm leaf manuscripts written with a stylus having water soluble carbonaceous writing. In the first instance the writing on the palm leaves is protected as described earlier. The palm leaf document is then placed on a waxed or oiled paper and covered with a piece of chiffon slightly larger than the document. Sodium salt of carboxy methyl cellulose (CMC) paste is applied on the chiffon piece with a brush starting from the centre and spreading outwards. The whole assembly is turned over on another waxed paper and the untreated side of the document is similarly treated. The oiled paper is removed from the document and the document is dried under pressure. Edges of the protruding chiffon are trimmed.
- ii. **Chiffon lamination:** Palm leaf documents having acetone insoluble writings may be reinforced by this process. Palm leaf is placed on a glass plate over which a slightly larger sheet of cellulose acetate foil is placed which is again covered with a piece of chiffon. A cotton swab dipped in acetone is rubbed over the chiffon. The assembly is turned over and pressed with hand. The other side is similarly treated and the leaf is dried under pressure.
- iii. **Cellulose acetate foil repair:** Palm leaf documents having benzene insoluble writing can be safely repaired without marring the legibility by using the following process. The document is encased in a frame of hand made paper and dilute solution (5-10%) of polyvinyl acetate in benzene is applied with a brush. A piece of cellulose acetate foil larger in size than the frame is simultaneously treated with the above solution. After the solvent

evaporates the foil is gently pressed on the encased leaf, to secure bonding of the leaf with the foil. The reverse side of the leaf is treated likewise and the leaf is dried under pressure.

- iv. **Tissue repair:** This repair process is successful in the following categories of palm leaf document.

1. When the leaves are thin as in the case of *Sritala*
2. Where writing has not faded, and
3. palm leaves with slight deterioration

In case the writings are water soluble, they are protected first by using the method described above. The document is then spread on the waxed paper and CMC paste is applied over it with a soft brush. A piece of tissue paper larger than the document is placed on the side of the document and laid lightly from one edge of the document to the other, pressing the tissue paper on the document. The other side of the document is similarly treated and then it is dried under pressure.

- v. **Tissue lamination:** Palm leaves having water soluble writings can be effectively repaired even without the ink protection treatment. For this purpose a special tissue paper is used which is coated on one side with adhesive acrylic rubber covered with a protective layer of silicon paper. Silicon paper covering is removed first and the tissue paper is so pressed on the leaf that no air bubble is left inside.
- vi. **Encapsulation:** This process is easy, and reversible. Palm leaf document is encapsulated between two polyester polyethylene or poly propylene films larger in size than the palm leaf. Edges of the film are sealed with a double sided tape.
- vii. **Solvent lamination:** Palm leaf document is sealed between sheets of cellulose acetate and tissue paper. A 'Sandwich' or envelop is prepared by assembling the materials in the following order: tissue paper, cellulose acetate film, document, cellulose acetate film and tissue paper. Cellulose acetate film is made semiplastic by application of acetone and on drying this forms a bond between tissue paper and document.
- viii. **Cellulose Acetate Paste repair:** Palm leaf manuscripts are also repaired by using a paste of cellulose acetate in acetone, incorporating a plasticiser and wetting agent. Palm leaf is covered by two sheets of tissue paper slightly larger in size than

the document. Cellulose acetate paste is applied with brush over the tissue paper. The paste enters the tissue paper and on drying binds the same to the document. The other side of the document is similarly treated.

Out of the various methods for repair of palm leaf manuscripts, there is no universal technique, which may be adopted. Each manuscript has to be handled individually. Writing technique, physical state etc. are to be taken into account, before any restoration process is applied. Type of deacidification technique, method for regaining of flexibility, reinforcement method to be adopted will have to be chosen out of the different techniques given above and will differ from leaf to leaf depending upon the condition of the leaf.

7. Need for further study

The traditional method of storing the palm leaf manuscripts between two wooden planks having a central hole which is also present in the leaves, through which a cord is passed and tied around the wooden planks for keeping the manuscripts in place, does not seem suitable for proper storage. The leaf tends to develop cracks in all the directions starting from the hole. Edges of the leaf are also damaged. The storage of manuscripts one over the other builds up high pressure over the leaves which are at the bottom, resulting in their damage. Constant and improper handling of palm leaf manuscripts is also harmful and results in their enormous damage. Storage atmosphere most congenial for palm leaf manuscripts is temperature 20-25°C and RH 50-60%.

The leaves should be kept loose in a box. There should be no friction on their edges with the walls of the box while keeping the leaves inside and taking them out.

The ideal arrangement for proper storage of palm leaf manuscripts could be to first carry out the necessary repair and restoration by any of the suitable methods described earlier. The repaired and strengthened leaf could then be inlaid or encased in a frame of handmade paper of requisite thickness. The different sizes of the palm leaf manuscripts could also be made into uniform formats by inlaying them in a frame. The sizes of the format could also be standardised to three or four formats to facilitate storage of assorted sizes. This could be kept in specially designed boxes to accommodate the sizes prescribed. The format of the box may be so designed as to enable the user to have the reference of the manuscript while it is in the box.

Holes may be punched in the margin of the frame of encased leaf. A plastic rod could pass through punched holes and may be freed in the style of loose post binding. As the leaves cannot be taken out, such an arrangement while providing proper safety in storage and convenient reference will also ensure security of these manuscripts.

Conclusion

Palm leaf manuscripts which are older and thus rarer than the paper manuscripts are priceless documentary heritage of our country. More concerted efforts are needed in the direction of their preservation. Special attention is called for the development and standardisation of improved techniques for their proper upkeep and storage.

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Modern Techniques on Conservation of Palm-Leaf Manuscripts

C.L. Prajapati

Inscriptions, coins, seals, records and manuscripts constitute a rich source of cultural heritage, preserving unique information which has been a powerful tool in all-round development of human race. Manuscripts on palm leaves alone in Indian subcontinent and South Asia, form a good chunk of cultural wealth and are in most of the Libraries and Archives, in a poor state of preservation. Since this wealth is of utmost use for writing and rewriting of history and also to throw light on the various aspects of human activities, their safety and security is the need of the hour for which knowledge of conservation is a must.

Conservation, in the field of Archivolibrary materials is meant to prevent the organic materials from undergoing any chemical and physical changes with the passage of time, because of which there may be decay, embrittlement, damage and ultimate loss. Besides, it also meant to strengthen, rejuvenate and aestheticify them in their post decay and damage, upto maximum possible extent, without the distortion and loss of information contents.

So far as the elements of conservation are concerned, conservators are divided. G.M. Cunha, the writer of a text, "*Conservation of Library materials*" is of the opinion that Library conservation is two-fold; Preventive measures and Restorative measures after damage has occurred. But what I feel is that conservation of Archivolibrary wealth compositely stands tetrahedral in structure i.e. it has four indiscrete faces which are termed as:

(i) Examination (ii) Preventive and Curative Conservation (iii) Restorative Conservation and (iv) Duplication.

Before any detailed discussion on the activities involved under each element of conservation is escalated, what is significant to mention that for conservation of palm-leaf manuscripts akin to other documentary materials of organic nature, the knowledge of the nature of the constituent materials of palm-leaf, the nature of ink, behavioural tendency shown by these two in climatic as well as in environmental conditions and disasters

striking the materials of palm leaves is of utmost need for a person entrusted with the job of conserving this wealth. Without the knowledge of the factors specified above, the effective conservation would be a dream. In view of this, to make this study purposeful, comprehensive and ultimately guide oriented, the conservation of palm-leaves will be discussed in three parts.

The first part will include historical background about palm leaves and their nature while second and third respectively preventive as well as restorative conservation.

1. Historical Background

Types of Palm Leaves

About 4000 species of palms are existing the world over, but two of them i.e. *Tala* and *Sritala* have been widely used by the scholars for writing through the ages. The former, in South India, is popularly known as Karimpana and the latter as Thalivola. To add to more about leaves, it may be indicated that *Coryphaumbra caulifera* and *Borassus flabielifer* are respectively the botanical names of *Sritala* and *Tala* Palm Leaves.

About the use of materials by man through the ages, it is significant to mention that in every age, in every society, the convenience, availability of materials in the surroundings of inhabitants and necessity have been the guiding forces for adopting any materials for use and the field of using information carriers is not exception to that. This is the reason that some record materials have been used widely in some reasons while some in other. For example papyrus as writing base was first adopted by the people of Egypt habituating in the region of Nile as the fauna of this region was rich in papyrus plant. Similarly, skins were first time adopted for use in Pargamum as the same were available in abundance because the animal slaughter was a major feature of the people of the region. Not different from this trend, though palm leaves were used the world over as writing base, yet in Indian subcontinent its use was major, as the fauna of this country was very rich in palms. Now the question is which palm, whether *Sritala* or *Tala* was first adopted for use? In this respect Mr. Hoernle, who examined a large number of Mss on palm leaf, believes that Talipat palm or *Sritala*, was first adopted for use while *Tala* in the subsequent period.

One startling fact mentioned by Hoernle while coaching his above views is that Palmyra palm was brought to India from Africa. What is his

source for fermenting this view, I do not know but I feel that his belief is not acceptable and requires thorough investigation.

Fauna of *Tala* palm is rich all over India but *Sritala* is mostly found in South India specially in Malabar coastal regions.

So far as the size of Mss on palm leaf it varies from 90 x 3.5 cm. and 10 x 3.5 cm.

If question is raised about the characteristics of both the types of palm leaves used for writing, it would be better to add that *Sritala* leaves are beautiful, flexible, thin, long, smooth and can absorb ink appreciably as paper. Quite contrary to it *Tala* leaves are coarse, thick, hard, short and lack in precise absorption of ink.

The purpose of this paper will remain incomplete unless it is mentioned that besides, two leaves, specified above, sheets made out of the palm leaves have also been used in India by the scholars, Pandits in different ages for incorporating their feelings and thoughts. One text on palm sheets which were made thick by putting various thin sheets of palm together and sewn, bearing some "Parvas of Mahābhārat" in Bangla script belonging to the period of Lakshman Sen year, is housed in Maharaja Jaipur Museum, Jaipur. Such collections are available in old Burma - now union of Myanmar also. The purpose of making the palm sheets thick was perhaps aimed to give a permanent character to the sheet as well as the text.

Again a question strikes whether the leaves of palm were directly used for incorporating characters and letters or before that they were subjected to any physical or chemical treatment to make them liable for writing? In this context, it would be significant to mention about pre-writing treatment of the leaves described by scholars in the past.

Pre-Writing Treatment of Palm Leaves

Shri B. Bhattacharya, Director Oriental Research Institute, Poona (in 1974) has mentioned in his article "Preservation of Palm Leaf Manuscripts," the seasoning of *Sritala* palm leaves before writing or engraving letters and characters over them.

The necessary steps involved for seasoning of leaves stated by him are as under:

- i. Removal of Sritala leaves from grown up tree, sprouting from their sheath and just beginning to spread and drying them in Sun for a period of a week.
- ii. Covering of dried leaves in mud for a duration of three months and cleaning subsequently after the expiry of period.
- iii. Keeping of cleaned leaves in kitchen exposed to smoke and making their use for writing as and when occasion of writing came after cutting and dressing them to required size.

Some scholars are of the view of treating palm leaves with "Gingely oil" before adopting them for writing and the purpose of this treatment was to smoothen and flexibilise the surface of palm leaves. It appears from the sources that this treatment was carried out to both the types of leaves. But it is doubtful that treatment of Sritala leaves with oil used for writing with fluid ink was essential as this treatment would have adversely affected the absorbency of fluid ink and hence in turn the lasting nature of writing. Dr. Satyendra, writer of *Pandulipi Vigyana* indicates the boiling of leaves and rubbing the surface with coach powder after drying before use for writing.

It is point worthy to mention that any activity or treatment is aimed at bringing out desirable changes on the object under treatment. Unfortunately, sources are silent about the desirable changes to be brought out because of these treatments. However, Shri Bhattacharya has mentioned that because of seasoning colour of leaves changed brownish from white. But it would be a wrong perception that the seasoning of leaves was only for the change of colour. Further, because of boiling, many mineral, fat and colour contents of leaf fully or partially, will go out which may result in hardening and discolouration of leaves. Any way, it is a subject of further research to find out the actual facts because of above treatments.

Writing Over Palm Leaves

Most of the people are aware of the present system of writing over paper. This system of expressing feelings on a support was in prevalence when other base materials like Papyrus, Parchment and Vellum were being used. Though, writing on papyrus is older than palm leaves, yet in the case of the latter, two systems of writing viz. by using fluid inks and quill pens as in case of present writing and by engraving letters and characters first and then colouring them were followed. System of engraving letters and figures was used for pictorial art also when palm leaf as support was

used. Still, this system can be seen among the foot path artists in the region of Bhuvaneswar, near important historical sites advertising the use of stylus for carving figures over palm and their radiant colouring for earning their bread.

So far as the material used for preparing stylus is concerned, at present iron or steel is deployed. But it cannot be presumed that the artists and scholars of the period in B.Cs. were using stylus made of this metal. Any way it is a subject for thorough investigation. During my visit to State Archaeological Museum at Bhuvaneswar, various types of styluses made of iron and brass were seen displayed in Museum gallery.

Obviously, two types of writing system in case of palm leaves seem to be in prevalence. Now the question is whether there was some specific consideration for writing over leaf with stylus and quill pens. While replying to the question, it is worthy to mention the scholar's belief which speaks that stylus was used for writing on *Tala* while ink and quill pens for *Sritala* leaf. Perhaps roughness, hardness and partial absorbing capacity to ink fluids of *Tala* leaf was not found fit for lucrative and lasting writing with quill pen using fluid ink while *Sritala*'s smooth, flexible and good absorbency to fluid inks, gave a suitable certificate for this writing. Characteristic qualities of *Tala* leaf were fit for engraving letters and that is why it was vastly used for writing with stylus.

Colouring of Engraved Letters and Figures

Colouring of engraved letters and figures is an important aspect of writing over palm-leaves to make characters and letters legible. This activity involves colouring technique, use of colouring agents and their state, i.e. liquid or solid. But before throwing light on this aspect it would be better to think over the various colours deployed for inking the engraved writing on palm leaves.

It is of great significance to mention that red colour was very much in vogue in Indian society during 5th-6th century A.D.* and palm-leaf writing is older than this age. Shri B. Bhattacharya has mentioned the use of the juice of true Indigo which is known as '*Nila*' in Sanskrit. But manuscripts written mostly with black colour are available on red and blue. For brightening the engraved letters and figures, soot, charcoal and in the subsequent period graphite was widely used and all of them were responsible to display black colouring.

*न्यस्ताक्षरा धातु रसेन यज्ञ
पूजित्वचः कुंजर विंदु शोणः

The technique of brightening or colouring the letters was very simple. Before inking, every colouring agent was made into powder and subsequently with the help of any suitable tool it was spread over the carved leaf and rubbed with the help of cotton or spongy material so as to deposit the powder in the gap of engraved letters. Afterwards, the surface of the leaf was cleaned with a clean cloth. Perhaps, advancement in society, made this process more scientific and mechanical and that is why, some scholars have mentioned to take the pigment powder in a sieve cloth and rub it over the carved surface of the palm with adequate pressure.

For preservation of ink over palm-leaf manuscripts, a powder (perhaps coach powder) was used to spread, after writing. Because of this powder lustre of original writing on palm-leaves was preserved, scholar believes. Sources have not thrown sufficient light on the point whether this powder was used for preserving the ink on engraved writings or for fluid ink writing or for both and is a subject of investigation.

Antiquity

Scholars are divided so far as the antiquity of palm-leaves is concerned. However, before reaching to any conclusion, it would be better to explore the old collections on palm-leaves available in the country and abroad. In this respect a few points extracted from various sources are as follows:

- i. Dr. Ludars in his famous text "Kieinene Sanskrit Texie Panti" has referred to a palm-leaf manuscript belonging to 2nd century B.C.
- ii. "Kusumanjalitika and Prabodhisidhi" written by a Saiva Acharya, in a text "Akhar Amar Rahain" (page 4) have been dated back to 2nd century B.C.
- iii. Some fragments of Sanskrit script on palm-leaf reproduced in the journal of "The Asiatic Society Bengal" No. 66, page 218 have been dated to be of 4th century B.C.
- iv. Two Buddha Grinths "Pragya Parmila Hradaya Sutra and Ushnishrivijai Charini", collected from Central India and housing at present in Hoiruj math of Japan, belong to 6th century B.C.

Taking all these facts into account, it may be deduced that even before 4th century A.D. the palm-leaf was being used as information carrier and thus the antiquity of palm-leaf writing may be fixed before 6th century B.C.

2. Preventive Conservation

This part of conservation is inclined basically to stop chemical, physical and other losses brought out to the Mss with the passage of time. For clear perception of the subject not only the understanding of the nature of palm-leaves and their constituent elements is essential but knowledge of enemies is also necessary. And therefore it would be judicious to discuss these two before advocacy on preventive norms.

Nature of Palm-Leaves and their Constituents

Entire archivalibrary materials of organic nature are made of carbohydrates and proteins and palm-leaves belong to the former group. Carbohydrate, is a natural compound made of carbon, hydrogen and oxygen which are potentially unlimited in number, but only very few types of chemicals, in general, found as constituent of palm-leaves are celluloses, hemicelluloses, legnins, fats, minerals, resins and colouring agents.

Celluloses are polymers of mono saccharides like alpha and beta glucoses and exist in fibrous state. Interesting is the story of cellulose fibres which come into existence when more than 10,000 monomers join together in straight form but fibre so formed cannot be seen by unaided vision. Though celluloses have fibrous structure but seldom exist in free state and in general found in packed and bundle forms. The precise configuration of cellulose rings in the chain and their setting in the plant and leaves along with other constituents, give rise to crystalline and non-crystalline regions which are extremely permeable to water like fluids. Skeletal structure of leaves in general is derived by the cellulosic fibres while flexibility and binding strength, respectively by fat contents and gum like resinous materials which also consist of linked rings of carbohydrate somewhat similar to the glucose molecules but having complex branched structure. Gums, like non-crystalline substances are also extremely permeable to fluids.

Legnin whose organic composition is still not clear, is susceptible to form complex acids because of oxidation and hydrolysis and that is why the quantitative embrittlement of manuscripts is presumed directly proportional to the quantum of legnin present in the leaves.

This knowledge of constituent materials of leaf and its nature will certainly help in understanding the losses brought out to this material by various agencies.

Factors Responsible for Decay and Damage of Palm-Leaves

Losses are brought out to every organic substance by two ways and palm-leaf is not an exception to that. One way of bringing loss is decay and another one is epidemic.

Decay of palm-leaves is responsible for loosening the bond structure of constituent materials present in the leaf which results in weakening the strength, embrittlement, loss of flexibility, hardening and also change of colour. But latter one cannot be taken as certainty for embrittlement as sometimes discolouration occurs because of accumulation of smoke particles and other solid particulars on the surface of leaves. However responsible agencies for decay are:

- i. Climatic factors
- ii. Polluting factors
- iii. Biological Damage

Climatic Factors

The disaster caused by this agency is the integrated effect of all the individual elements constituting climate. The elements of climate in general are considered light, heat and moisture.

Light, which is comprised of various visible and non-visible electromagnetic radiations is treated an enemy of palm-leaves because of the penetrative capacity of ultra violet rays and their capability to set photo-chemical reaction among the various constituent materials of palm leaf. It is presumed, once this reaction sets in that continues round the clock even in the darkness. Because of chemical and physical action started by light, disintegration of cellulose fibres and other constituent elements which generally results in discolouration and embrittlement of leaves, starts. In the same way, because of excess heat cellulose of lower molecular weight are formed resulting in embrittlement of leaves.

The important fact to be known is that every organic material requires a specific amount of water for normal existence. Any change positive or negative in this level adversely affects the contents of leaf and results in the loss of flexibility and rise of hardness. Amorphous regions in the leaves, provide easy access of water vapours and sustain hydrolysis, swelling of leaves and provides free passage to other pollutants. It is also an essential adjunct to all process of biodegradation.

Polluting factors

Polluted atmosphere poses a serious problem for the deterioration of palm-leaf records and various agents are responsible for creating a polluted zone. But, in the context of archival wealth including palm-leaves, all pollutants may be sub-grouped as

- a. Environmental pollutants.
- b. Internal active pollutants.

(a) Environmental Pollutants

Pollutants of this group in general exist in the form of particles of mineral dust, salt dust, smokes and gases. Though representation of dust particles in the atmosphere of tropical and sub-tropical countries is a common feature, yet the atmosphere of areas where volcanos burst quarrying functions, industries breath and storm breaks is always thickly represented by dust particles. Particles of geological origin being fully oxidised do not pose chemical danger for palm-leaf manuscripts but their role as subsidiary assistance to water vapours and other gaseous pollutants in affecting leaves adversely cannot be overlooked. Likewise cement and lime dusts because of their alkaline character cause unusual form of degradation. Particles of acidic sulphate of ultrafine nature are ascribed by coal combustion, electricity generating plants and impart acidity to manuscripts or palm-leaves. A thick accumulation of various types of dust particles whereas enhance hygroscopic character of leaves, it provides suitable media for fungul nucleation. Smoke which results from incomplete combustion of fuel like oil, wood, coal and rubbish is essentially made of carbon (black in colour), an inert substance. Though it causes no chemical decomposition of constituent materials of leaves on accumulation over them, yet carbon particles being surrounded by oily and tarry substances which have acidic character, cause carbon particles stick to the accumulated surface and results in discolouration and acidification of leaves.

The atmosphere in general is represented by various gases but atmosphere of metropolitan cities and of the towns and places thickly populated by industries get gaseous representative enhanced not only in number but also in quantum and that is why the atmosphere of the latter two is presumed to be incongenial for the preservation of palm-leaf manuscripts. Active gases adversely affecting the leaves are: sulphurdioxide, oxides of nitrogen, ammonia, ozone and oxygen.

Sulphurdioxide which is formed because of combustion of coals, oils and pyrites is acidic in nature and after dissolving in water, transforms to sulphuric acid. Being non-volatile it remains with the material of leaves indefinitely.

The fuels mentioned above apart from emitting sulphurdioxide are also responsible for forming oxides of nitrogen. In addition to above, lighting, heating of air to elevated temperatures, combustion in petrol engines, furnaces and boilers also form a group of important sources producing oxides of nitrogen. Quite significant is to mention that Archives and Libraries making use of cellulose nitrate base films, possess an internal source for generating oxides of nitrogen as this film material gets hydrolysed and emits these gases. These oxides also dissolve in water and form nitric and nitrous acids.

Sulphuric acid and nitric acids both being very powerful oxidising agents, causes embrittlement, discolouration of cellulose materials present in leaves by forming oxicelluloses of lower molecular weight.

Likewise, ozone though unstable, yet being strong oxidising agent is responsible for affecting many organic substances. Photocopying machines apart from others also form prominent source of producing ozone.

Ammonia, after dissolving in water though forms alkaline solution, yet its reactive nature, rapidly forms salts with other gases and induces accumulation on the leaves surface which contributes localised acidity.

Oxygen, among the gas pollutants is one of the major agents damaging the cellulose materials adversely. Oxygen is said to be an enemy of organic materials. It is astonishing because it is recognized as a life sustaining element and not as a life degenerating agent. But it is true that it helps in break down of organic materials present in the palm-leaf manuscripts.

(b) Internal Active Pollutants

Pollutants of this group are from the Archives and Libraries making use of modern aids of conservation to preserve Mss books and Archives. They are varied and complex than the simple molecules of the atmosphere. Cellulose acetate, drying oils (formic acid), plastics and adhesives are identified as the sources to emit the pollutants like methanoic (formic acid), ethanoic (acetic acid), propanoic, butanoic and aldehyde methanol (formaldehyde or formaline in water). Apart from Hydrogen peroxide, Nitric

and Hydrochloric acid are also known to damage the palm leaf wealth as internal active pollutants.

Biological Damage

Apart from the decay, damage caused by biological factors are epidemic and scars left over the leaves, discernible to unaided vision. Responsible agents for this type of damage are:

1. Insects and Pests
2. Parasytic Organisms
3. Animals.

Silver fish, cockroaches, booklice, bookworms (*Gastrallus Indicus*) moth and termites are common enemies of this group damaging archival wealth.

While discussion is made on the destruction made by the living organisms, it is worthwhile to mention that every living organism requires raw material as food for its existence, growth and multiplication. These insects, have their choices for food as in the case of silver fish and cockroaches, entomologists believe that both these insects feed on glue, starch and gelatine and hardly on cellulose. That is why the reports from various Grinthagars and Libraries are hardly talking about the damage of palm-leaves by these two insects as in unreinforced manuscripts, food material of their choice is not available. However, the danger from them cannot be ignored if the collection of manuscripts on palm is represented by repaired manuscripts also.

Gastrallus Indicus (Bookworms) are the enemy of manuscripts as they feel delight in perforating leaves. Loss caused by this enemy may be evidenced in various manuscript Libraries in India.

Few species of termites have the capacity to digest cellulose because of the presence of protozoans in their intestine and are responsible to damage the wealth under discussion by the burrowing tunnels ever managed. Darkness, moistened and temperate climate, is suitable for the occurrence of termites and plan their usual activities.

Hot and humid climate with the help of other rubbish materials, generally give rise to parasitic growth like fungus. This agency not only destroys the surface initially but also causes for blocking of manuscript sheets. A very good chunk of manuscript collections in Private and Public

Grinthagars, specially located in coastal areas, are suffering because of this problem.

Perhaps our talk on the enemies of palm-leaf manuscripts will not be complete unless the role of animals in this respect is not counted. Normally rodents are famous for disfiguring the organic materials like palm-leaves because of various reasons but role of social animal, human being, in this respect no way can be ignored. They knowingly and most probably unknowingly force the leaves on the course of loss during the time of their handling, storage, use and also by not paying proper care for their preservation.

A very serious danger is posed to this wealth by fire and intrinsic elements which are comprised of flood, earthquake and land sliding.

Preventive Care

Innate strength and resilience of every information carrier, specially of organic nature differs from sheet to sheet and medium to medium but there is one thing in common and that is their decay with the time span. However, this rate of decay which is defined by various physical and chemical factors, can be controlled by controlling these factors. But only control would not result in preventive care of palm-leaves in full unless they are saved against the other enemies mentioned earlier and it requires thoughtful planning and management.

To plan strategies against every enemy in order to protect the valuable wealth in the form of palm-leaves manuscripts, special attention is required about the storage area/room, climate and environment, etc. However, before talking about modern preventive measures, what is needed is to explore the systems in practice in the past.

Fragments of literary sources, reveal the fact that before the entry of new era Indian people were much aware about preserving the palm-leaf manuscripts and for that writing leaves, were stored in kitchen after tying them in bundles. For tying, a central hole through all the manuscript sheets of text was made. Please see attached photograph. It is a scientific fact that smoke particles have capacity to repel the insects. Though a thick deposit of smoke particles over leaves, brought out undesired changes on the leaves, yet system was effective for prevention of insect attack over palm-leaf manuscripts. Apart from this, herbal insect repellents such as "ghora bach" (*Acrus Calamus*) was also used to prevent the insect attack.

This herbal insect repellent dried in shadow was powdered and then kept in bustas containing palm-leaf Mss in small packets. Two colours of

cloth i.e. red and yellow have been preferred for wrapping manuscripts. The question is why only these two colours? It is not clearly known that people of ancient period were aware of the character of these two colours whether really they discourage insects and absorb ultraviolet radiations, but now it has been scientifically proved. There seems no system in prevalence to protect the Mss against environmental factors as well as fire and intrinsic dangers. Since these factors are really very effective in bringing loss to manuscripts, it is essential to protect the wealth in discussion against them.

Light

While planning strategies against this enemy, it is to be ensured that the wealth from both the sources of light, natural as well as artificial, is reasonably safeguarded and for that entry of ultraviolet light from out side of the building or repository where Mss are housing, is to be barricaded and from external sources such as tube lights or any bright light presumed to emit ultraviolet light is to be absorbed. For the purpose of the former all the windows and ventilators of the building/repository should be fitted with any of the coloured glasses, such as red, yellow, blue, green, black or glasses containing titanium oxide while for the latter one all the tube lights require to be worn with glass sleeves which are effective to absorb a good chunk of ultraviolet light.

Scientific storage and ideal storage conditions

Scientific storage in ideal storage conditions really checks the Mss from immature ageing and other physical damages. So far as scientific storage, tying of cloth, silk wrapped manuscripts in between two wooden boards is an age old practice. But the problem caused because of short width of manuscript sheets this storage system could not bring out satisfactory results and still a good chunk of loss to Mss occurs because of storage. To resolve this problem, a newer system of keeping Mss in book form has been invented and details of that would be given while talking about restorative conservation. However, placing of palm-leaf manuscripts in carton boxes is a good practice to prevent damage because of storage and handling.

So far as ideal storage conditions, unwavy, dustless and pollutionless environment of the stack area or space, optimum temperature and humidity ranging at respectively 23°C and 50-60%, are the most desirable elements. All these requirements except dustless space, can be achieved by monitoring the repository. But monitoring, being the costliest system, it is beyond the

reach of most of the agencies preserving Mss in a country like ours and to achieve the ideal storage environment for the want of monitoring system, mixed system making use of manual and mechanical aids is used.

For lowering down temperature in any storage area whereas vegetation in the surrounding, tones down the intensity of heat, putting of water in shallow pots at various points of the stack area reduces the temperature range and also increases humidity. Air circulation by deploying air circulators, exhaust fans and ordinary fans, facilitate the system to be more effective.

The excess of humidity in a stack may well be brought to the optimum range by making use of mechanical dehumidifiers. In lack of this facility dehumidiating chemicals such as silicagel, an anhydride calcium chloride may be used.

To achieve a dustless stack, periodical cleaning with vacuum cleaner and wiping of floor instead of brooming it with wet cloth or wet jute has been found very scientific and effective. Likewise to create a pollution less environment within the stack, air washing system is very useful. In addition to it wall hangings treated with antifire resistant materials, also helps in reducing the effect of external pollutants while to get relief from internal pollution examination of old storage materials, and segregation of suspected materials as a matter of urgency is the only effective measure.

Relief from Living Organisms

It has already been mentioned that herbal insect repellents were used to get rid of insects, damaging palm-leaf documentary wealth. B.Bhattacharya, has mentioned the use of crude/kerosine oil to prevent and remove worms and insects boring holes in the Mss. He has also mentioned that use of turpentine oil on the covers proves to be of preventive value.

Silk is found remarkably free from *gastrallus indicus*, and that is why it has been used as reinforcement and wrapping material for palm leaf manuscripts preferably from ancient period.

Recently, the use of insecticides, pesticides and fungicides has increased in Archives, Libraries and other allied institutions holding documentary wealths of organic nature to discourage and root out organisms and insects of various nature. There is no dearth of such materials now-a-days in the market but what is more important to consider in selecting a suitable chemical is that such materials should not affect adversely the life of support as well as ink used over that for writing and

also the life of working staff. From this view point, the use of naphthalene bricks as insect repellent, pip and begon as insecticides have been found satisfactory. Naphthalene bricks of specific size are kept at a spacing of $1\frac{1}{2}$ m. at different points of stack area while the latter two are sprayed periodically on walls and floor of the room and not directly over the Mss to disinfect the stack areas, specially in transition periods of the year.

To root out the fungus growth, from the Mss they require fumigation with thymol in a fumigation chamber made of card board and subsequent treatment with 5-10% solution of thymol in methylated spirit while to annihilate insects from the Mss their fumigation with paradichlorobenzene as well as with killoptera in steel air tight fumigation chambers with perforated shelves have demonstrated encouraging results.

So far as checking termite infestation, a long term policy basically from the selection of site for a building to be used as repository is involved. However, the wealth under discussion can be saved against this enemy by blocking the entry of the specie and that is possible by removing wooden articles from the walls, and filling cracks and crevices on walls and floor by concrete, avoiding use of wooden racks for storage and maintaining a suitable gap between racks and walls. The important factor in this connection is the periodical inspection of the building, specially stack areas and timely treatment of the infected spot (which is displayed by shelter tubes) by pip and gammasene.

Since termites are very intelligent insects and in order to escape their enemies they make underground shelter tubes out of the places where they plan their attack. Therefore as relief measure from this agency, the building frequently attacked by this insect, requires antitermite treatment and spray poisons like white arsenic, creosote dieldrex, etc. at the infected points.

To save the Mss wealth from ravages of rodents, a building/repository at the most should invariably be provided a rodent barricading character and for that every outlet, window and any other point where from entry of rodents is possible, should be fitted with wire mesh. Because of this arrangement rodents from outside will not get entry. Secondly, edibles in the stack should be prohibited. Thirdly, every door connected with repository should be fitted with self-shutting system granting automation character to it. If inspite of all these measures any rat enters the stack, he should be trapped in by using rat trappers or killed by making use of rat poisons such as Barium carbonate (10-15%) — warfarin and zink sulphate, etc.

3. Restorative Conservation of Palm Leaves

Conservation in this part is implied to improve over all physical status of a palm-leaf not only in its look but also in its strength and involves following steps.

Cleaning

Physical cleaning of palm-leaf manuscripts is aimed at the removal of dust particles of various nature, smoke particles and chromophorous materials causing discolouration. Role of these agencies has already been discussed earlier and need not be repeated at this juncture. Any way, cleaning of manuscripts involves both mechanical and chemical processes.

In mechanical cleaning, means like cloth, cotton, wool and sponge are effective in removing those dust particles which have freshly accumulated over them and do not stick to the surface of manuscripts while for removal of remaining other agents sticking to the surface, chemical cleaning becomes inevitable. For the purpose, palm-leaf manuscripts are at the first instance paginated just to facilitate maintaining their order if they are part of a text and also to have a count of them. Any convenient system of pagination responding less time consumption may be deployed by the custodians. But in case of washing or chemical treatment for cleaning ink used for writing is a factor well to be taken into account as most of the inks may bleed in the solvents used for the purpose. No doubt, Mss bearing engraved characters, letters and figures, it happens to lose colour during the cleaning treatment, they may be re-inked and brightened as post-treatment activity. But other manuscripts if because of any reasons deink, they are impossible to revive for ink.

If the inks used for writing on the leaf are impervious to water, washing in distilled water makes a manuscript free from most of the unwanted deposited physical agents on them. O.P. Agrawal has suggested cleaning the leaves with a mixture of glycerine and water. However, these methods of cleaning are quite in disagreement for the manuscripts bearing water soluble inks and for the purpose according to the merit of ink, Ethanol Carbon Tetrachloride, Methanol, Methylated Spirit, Toluene, Petroleum Ether, Benzene, etc. and Hydrogen Peroxide can be used. Use of peroxide for cleaning of manuscripts, requires thoughtful and careful treatment as it is being an oxidising agent, may adversely affect the support and ink both with the passage of time. However, cleaning of soiled manuscripts is followed by their deacidification.

Deacidification

It is a well-known fact that nutritious diet to a patient before elimination of the disease and its causes is fruitless in improving his physical status of health. Very akin to this reinforcement of any palm leaf manuscript without removing acidic contents of that would bear no lasting fruits. The simple reason behind it is that the materials used for imparting strength to the manuscript will also be attacked by round the clock active acidity resulting in degradation of not only manuscript but also the material in its contact used for reinforcement. And that is why, deacidification in restoration of documentary wealth is an important activity before reinforcing them.

Before, subjecting a manuscript for deacidification, knowledge of the nature of manuscript whether or not it is acidic is a must. Acidity is generally expressed in terms of pH. Though pH below 7, always demonstrates the acidic character of the substance to which pH is related, yet pH range below 6 is intolerable for a conservator responsible for the conservation of cultural property of nature under discussion because of its ruinous character. In other words, it may be said that acidity is treated as a death knell to the organic substances which are to be kept for unlimited time.

PH of manuscripts can be measured by deploying any methods (1) using pH indicator paper (2) using pH universal solution, (3) using pH meter digital or non-digital and (4) most convenient pH fluids vastly in use today in developed countries.

For deacidification of manuscripts written with water resistant inks, use of calcium and magnesium bicarbonate solution is encouraging. For treatment both dip and spray techniques can be deployed. If this method of deacidification is deployed, addition of 5-10% of glycerine to the solution, will carry out both the washing as well as deacidification altogether. Normal treatment of manuscripts with the above solution and deploying dip method, will also result in cleaning and removing acidic ingredients of the manuscript. However, for deacidification of manuscripts written with inks soluble in water organic solutions such as Barium hydroxide in methanol or acetone, magnesium methoxide in methanol and magnesium acetate in industrial spirit, on the merit basis will solve the purpose. For treatment both the spray and dip techniques can be used.

Remember, a blocked mass of palm leaf manuscripts, will certainly change the course of treatment narrated above. In case of treating a blocked mass, the work of pagination and their separation would be conducted

simultaneously. If a manuscript has fragmented in to more than one piece, and if it is within the restorable range, every piece should be allotted the same number which will help in identifying the pieces if because of any reason, they mix up with the pieces of other manuscript sheets. As a matter of urgency, bitterly damaged palm-leaves should be kept individually in docket covers or in any other suitable pot.

Separation of blocked manuscripts

So far as separation of blocked manuscripts, hot paraffin liquid has been suggested by the conservators. But moistening of blocked Mss in a humidifier, maintained at 80-90% humidity, has been found very encouraging in separation of stuck up sheets. But for this work trained, skilled and experienced hands are very essential. Untrained, inexperienced and unskilled hands may bring irrecoverable loss to manuscripts during the process of their separation. Only after their separation and pagination, they are subjected for cleaning and deacidification.

Relaxing of Brittled Palm-Leaves

Hardening of palm-leaves is one of the causes to force them for embrittlement. It has already been advocated that storage of palm-leaf manuscripts in monitored repositories is the ideal method to prevent them from decay, hardening and spoilage because of insects and pests. However, the valuable collections, available in various Archives, Libraries, Museums and Grinthagars scattered throughout length and breadth of this country are in a poor state of preservation and require immediate attention if they are to be saved from losses. Before any strength is imparted to such dead manuscripts, restoration of their flexibility is no way less important than putting a dying patient in oxygen. The importance of restoration of flexibility of hardened palm-leaf Mss to keep them preserved was realised by the conservators and that is why various oils, organic products were tried world over for this purpose. A few relaxing methods, used in various Archives and Libraries are as under:

- i. In the Royal Library of Congress, embrittled palm-leaves were relaxed by using drying oil which is absorbed in the honey comb centre of the leaf where from it generally hardens and results in restoring flexibility.
- ii. O.P. Agrawal is of the opinion that cleaning of hardened palm-leaves with glycerine and water and treating them with

- camphor, citronell oil or walnut oil improves flexibility up to some extent.
- iii. M.V. Nair, in his experiments of treating hardened palm- leaves of both the varieties with 1-5% solution of fresh palm-leaf extract (colourless) in alcohol and isopropanol, has found that flexibility of so treated leaves increases. He also observed that treatment of embrittled leaves with a mixture of colourless palm-leaf extract, clove oil, black pepper oil and sandal wood oil shows enormous improvement in flexibility.
 - iv. Recently, D.G. Suryawashi, M.V. Nair and P.M. Sinha, found that treatment of embrittled palm-leaves with a number of vegetable oils, such as camphor and eucalyptus oils, in normal atmospheric conditions, is better helpful in improving flexibility of hardened, palm-leaves while in hot weather conditions margosa (Neem oil), Lemon grass and citronell oils are very effective in softening and improving flexibility of palm-leaves. Besides, polyethylene glycol 200 has been found effective for improving flexibility of hardened palm-leaves.

The important question which strikes is whether all these oils and materials mentioned above can be deployed for restoring the flexibility of all the varieties of palm-leaves in all the types of prevailing atmospheric conditions world over? In reply, it would be judicious to quote few observations made by the conservators of the past. An oily and greasy material rich in fatty acid contents such as drying oil though is very effective to impart flexibility, yet in hot and humid climatic conditions it shows damaging effect over the leaves i.e., because of treatment instead of improving flexibility, in climatic conditions mentioned above, it hardens the leaves. So is the case with polyethylene glycol which does improve flexibility but sustains fungus growth in hot and humid climate as it is hygroscopic in nature.

Taking all the facts mentioned above into account it may be concluded that the materials deployed for improvement and softening the hardened and brittle palm leaves in one climatic condition may be unsuitable in other type of climate. And therefore, before adopting any softening oil for use, it requires preliminary testing to judge its suitability in prevailing climatic conditions, failing which treated Mss may suffer adversely.

Fastening of brittle and Decayed Sheets

Fastening of decayed and brittle palm leaf manuscripts is another important step in restorative conservation. This activity not only infuses life to a dead material but also rejuvenates its physical look upto some extent within archival restorative doctrines. In the past, bitterly damaged palm leaves manuscripts were restored by conservators using silk gauze, chiffon and wheat flour paste or paste prepared by mixing maida and dextrene in ratio 1:1 and also by using acetate foil, silk gauze and acetone with great success.

The process of imparting strength to decayed and brittle manuscripts on palm leaf using gauze and maida paste is like this. First of all two pieces of durable silk gauze larger than the size of the manuscript to be reinforced, are cut. Subsequently, the manuscript to be repaired is stretched over the oiled or waxed paper on a glass top working table. Thirdly, thin maida paste having good adhesion property is applied gently over the manuscript. Remember, paste to be used for repair should invariably be nodules free. Fourthly, the piece of silk gauze is so stretched over the leaf that some portion of it remains protruded all round the manuscript. Fifthly, covering the entire assembly with an oiled paper piece slight pressure is applied over the manuscript to facilitate proper adhering of manuscript with silk gauze. Sixthly, the entire assembly is turned over on the other sheet of oiled or waxed paper and the process of applying paste on this surface of manuscript and pasting of silk gauze is repeated. Now so reinforced manuscript is turned over on blotting paper and kept on perforated drying rack for drying. After the repaired manuscript dries, leaving a margin of about 5 mm or so, all round the edges, the rest is trimmed off with a sharpened pair of scissors.

All the pieces of a manuscript of broken state, as a matter of second activity, are set at their appropriate places over a waxed or an oiled paper, depicting the original manuscript and then reinforced with silk gauze and maida paste already described.

Manuscripts can as well be reinforced by solvent process making use of acetone, silk gauze and acetate foil. As a first step of this process, to fasten a sheet of manuscript, two pieces of silk gauze and two pieces of acetate foil equal to the size of pieces of silk gauze are cut. Pieces of silk gauze and acetate foil should be larger than the size of manuscript to be fastened. Now over glass top table, one piece of silk gauze is stretched and

over that a piece of acetate foil referred above is placed. Subsequently, manuscript to be reinforced is placed over it. If manuscript is brittled, all the pieces are set as stated earlier. Finally spread remaining sheet of acetate foil and over that the another piece of silk gauz. The thematic arrangement of all the sheets will be in the order as shown in the figure, which is appended.

To keep the assembly set along with manuscript pieces, acetone at broken points as well as at all the four corners of the manuscript is so applied that it may pass on to the glass top. Subsequently, acetone is applied all over the top surface of silk gauz with the help of cotton wool. Application of acetone should be started from central region of Mss towards periphery. The process is repeated after turning over the assembly and edges cut as suggested above leaving a margin all round after drying of repaired sheet.

Reinforcement of palm Mss written with water soluble inks is really a problem in restoring them with any paste prepared in aqueous medium. But, if ink is protected first before reinforcement, they can easily be repaired by such pastes. For protection of inks, 5-10% solution of bedacryl in benzene or acetone has been found very encouraging.

Generally, problem is faced to catch hold of the brittled pieces together during the process of applying maida paste as well as acetone. Keeping this problem in view a newer method of fastening brittled manuscripts has been developed and the result obtained are quite satisfactory.

In this newer technique, all the embrittled pieces of a manuscript sheet are set as stated afore and then 5-10% solution of acetate foil in acetone, is sprayed with the help of sprayer. Conveniently, this solution is applied with the help of artist brush over the broken joints. Fastening of joints is ensured after some time of applying or spraying the solution and if loose fastening is observed, spray of solution may be repeated. So treated manuscript is now repaired either using silk gauz and maida paste or solvent process described above.

It is presumed that incapsulation of palm leaf manuscripts using polythene (mylar) and special adhesive tape may also be effectively deployed for adding strength to the decayed sheets of palm leaf manuscripts. The unique characteristic of the process is that the manuscript is caught hold

of because electrostatic force comes into play between the polythene sheets. However, efficacy of this process is yet to be studied on practical grounds.

The unique feature of this paper is the newer method developed by the contributor of this paper employed in National Archives of India, to preserve palm leaf Mss in book form. This technique resolving the age old problem of storage of palm leaf manuscripts would tone up the norms in case of palm leaf manuscripts.

Newer Method of Preserving Palm-Leaf Manuscripts in Book Form

In the system recently developed by the contributor of this paper, two sheets of palm-leaf manuscripts, fastened or unrepaired, are fixed in each sheet of the book. This sheet is prepared by two equal sheets of durable and permanent paper like hand-made paper. Thus the number of sheet of book will be half of the number of Mss. For example, if number of palm-leaf manuscripts of a text is 50, the total sheets of book to be prepared by newer method would be 25. For perception of the technique the attached sample book may be seen.

- a. Figure showing the first sheet of the book in which two palm leaf manuscripts bearing pages 1 and 3 have been fixed.
- b. Figure showing the second sheet of the book in which another two sheets of the palm-leaf Mss bearing page nos. 5 and 7 maintaining chronological order but getting different position compared to first sheet, have been fixed.
- c. Figure showing the third sheet of the book in which for fixing manuscripts in order containing page nos. 9 and 11, the system of the first sheet of the book has been repeated.
- d. In the fourth sheet of the book, the system of the second sheet of the book for fixing another two sheets of palm leaf manuscripts would be repeated.
- e. Remaining other manuscripts of palm leaf will be fixed in alternate fashion stated above.
- f. As mentioned above, a text of 50 sheets of palm leaf manuscripts can be put in 25 sheets of the book prepared by newer method.

- g. Plan of arrangement of 50 palm-leaf manuscripts in 25 book sheets would be as under:

Page number of the Book sheets prepared by newer method	Pages of palm-leaf manuscripts getting place in new Book sheets	
1	1, 3	(This plan signifies when odd number system of pagination is adopted)
5	9-11	
9	17-19	
13	25-27	
17	33, 35	
21	41, 43	
25	49	

Remaining other sheets of palm-leaf manuscript will get place in rest of the sheets of the book, prepared by newer method in chronological order.

Technique of Fixing Manuscript Sheets in the Sheets of the Book to be Prepared by New Method

1. As a first step, the dimension of palm-leaf manuscript is measured. Suppose it is 37 x 3.5 cm.
2. The size of sheets of the book in which manuscripts of palm-leaf are to be fixed should be selected in such a way that manuscripts could be placed conveniently facilitating opening of book without any strain.

For the above size of manuscripts, the selected dimension of sheets of hand-made paper is 48 x 24 cm.

3. Leaving a margin all-round the edges, as specified in the format enclosed, rectangular blocks in which sheets of manuscripts are to be attached are prepared. Please see format enclosed.
4. Rectangular portion of the format with dotted lines is removed with the help of sharpened instrument.
5. All the formats prepared are made wet.
6. Take two wet sheets of the format and stretch one of them over blotting paper and not over the oiled or waxed paper.

7. For convenience sake, after moistening the formats; they should be stretched over blotting papers so that excess of water is absorbed by the blotter.
8. Apply thin noduleless maida paste over the stretched format and place suitably palm leaf manuscripts bearing page nos. 1 and 3 facing top, over the rectangular windows, in such a manner that written portion is no way covered.
9. Suitably apply paste all-round the unwritten margins of the manuscript sheets with suitable process.
10. Take another sheet of wet format and stretch it over the first format bearing palm leaf manuscripts in such a manner that windows of second format overlap the palm leaf manuscripts bearing page nos. 1 and 3.
11. Cover the entire assembly by a waxed or oil paper and hand press it by a cotton cloth.
12. Remove the oiled or waxed paper and retire the sheet containing palm leaf manuscripts to a fresh blotter and keep it for drying in a drying rack.
13. Fix, manuscript sheets bearing page numbers 9,11,17,19,25, 27,31,35,41,45 and 49 using the process explained above.
14. For remaining sheets, change the dimension of the format in such a manner that palm leaf manuscripts bearing page numbers 5 and 7 when attached to the sheet as per procedure described above are not overlapped by the above manuscripts 1 and 3 when sheets of the book to be prepared by newer method are arranged chronologically and collated to stitch and bind in a book form.
15. Attach remaining manuscript sheets maintaining order in the same dimension of the format as above.
16. For proper adhering and also for removal of wrinkles all the prepared sheets are pressed at their semi dry stage in a dab press, gently.
17. After the sheets are completely dried, they are arranged in chronological fashion, stitched and bound to give a book shape.

It is a well-known fact that maximum loss to palm leaf manuscripts, repaired and unrepaired is brought over because of inconvenience in their storage and handling during both storage and use. But because of this technique, quantum of loss due to factors stated above would be minimised and thus patrimony in the form of palm leaf manuscripts be preserved for

posterity. Another characteristic of the technique is that the thickness of manuscript bundle is reduced by expertised dimensional distribution of manuscript sheets while fixing them in book sheets. The blocking of manuscript sheets because of any reasons has already been eschewed 100% in their placing adjustment in book sheets and the same may be ensured further by inserting blank, thin hand-made paper sheets in between every block of two sheets of the book, if danger of blocking of manuscript sheets is felt to be looming large. Though it would result in enhancing the bulk which is not in tune of restoration ethics, yet it may be compromised viewing over the importance of manuscripts preservation.

Suggestions

Need is there to take up thorough investigation on the pre-writing treatment of the palm leaves, various styluses used for engraving and inks for colouring engraved characters.

Conclusion

It is hoped that the contents of the paper will not only put forth the detailed information about palm leaf Mss but also help in nucleating the science of their scientific conservation and as such conserving the cultural wealth available on palm leaves.

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[Faint handwritten text from another manuscript page]

॥ श्रीगणेशाय नमः ॥
 अथ श्रीभक्तप्रसादस्य वृत्तान्तः
 भक्तप्रसाद उवाच -
 श्रीकृष्ण उवाच -

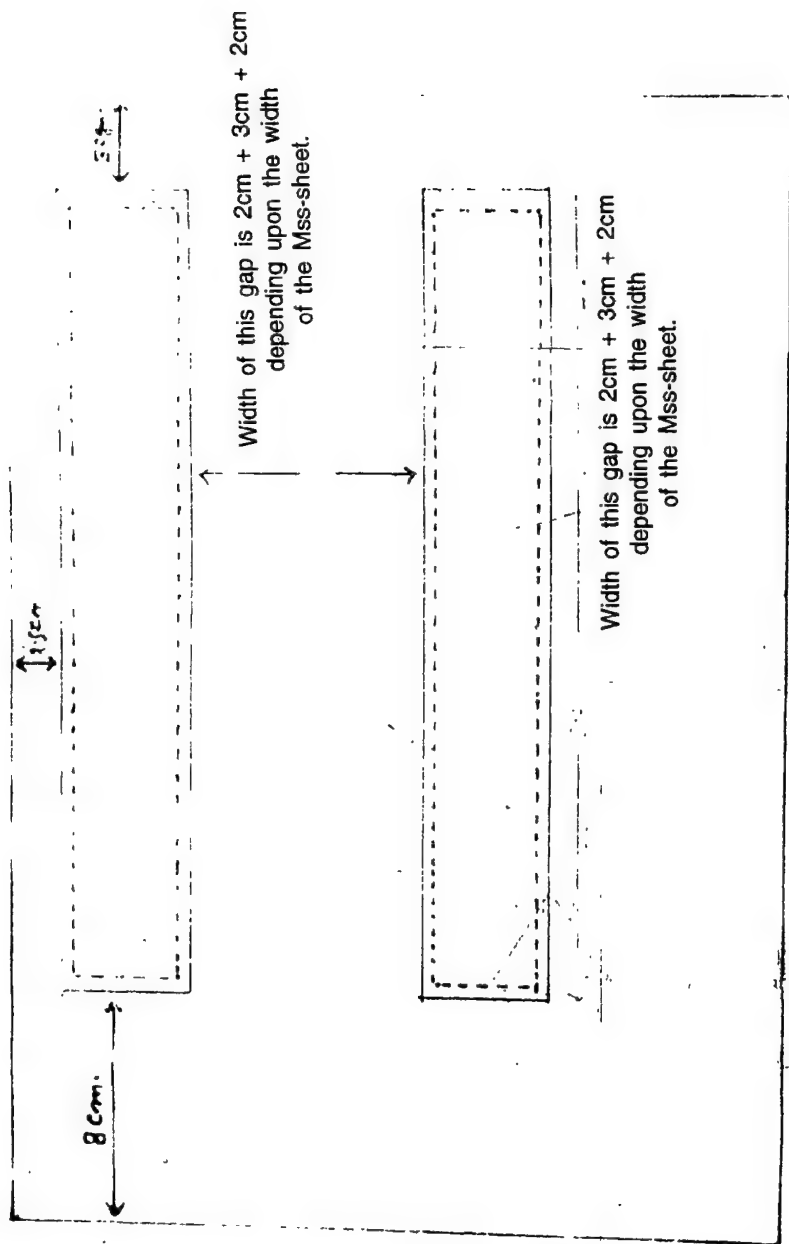
- d. In the fourth sheet of the book, the system of the second sheet of the book for fixing another two sheets of palm leaf manuscripts would be repeated.

॥ अथ चतुर्थः पत्रः ॥
 तत्र द्वौ पत्रौ निरूप्यते । तत्र
 द्वौ पत्रौ निरूप्यते । तत्र
 द्वौ पत्रौ निरूप्यते । तत्र

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Thematic Sketch of a Format



Valedictory Address

A. Pandurangan

Dr. Shu Hikosaka, Dr. John Samuel, the Directors of the Institute of Asian Studies, Madras, Learned Scholars from various parts of India, Distinguished Guests, my colleagues and students.

I deem it a great honour and privilege conferred on me to preside over the Valedictory function of the National Seminar on Palm-Leaf and other Manuscripts in Indian Languages and deliver the Valedictory address. When the Directors of the Institute of Asian Studies, Madras, the sponsors of this important Seminar, invited me to preside over the function, I accepted the offer with great hesitation because I do not claim any special knowledge in the vast and highly technical subject like Manuscriptology. Sir, I feel that because of your abundant love and affection, you have honoured a fellow teacher and my department.

During the last three days we have been participating in the scholarly deliberations on the various aspects of manuscriptology. We could get a glimpse of the glorious past of this great country. We could understand the ancient Indian scholars who chose to communicate their chosen thoughts through various languages. From time immemorial India has been a multi-lingual and multi-ethnic country. But the differences of language and script did not deter them from understanding and communicating with one another. Scholars from south to north, from east to west could move freely from one place to another for study and patronage. The Pallava court at Kanchipuram invited Acharya Dandin to settle in their capital. Acharya Dharmabala from the South adorned the then highest seat of learning, the Nalanda University. Though there were diverse forces pulling in different directions, there was near unanimity on various aspects. The scholars conversed in Sanskrit, the lingua franca of the ancient and medieval India and transmitted their thoughts to every nook and corner of the country.

From the learned papers presented in the seminar as well as from the deliberations, we come to know that Indian kings and religious mutts had patronized the poets and scholars. They collected a large number of manuscripts in different languages and presented them diligently. Linguistic chauvinism did not raise its ugly head in those days.

We come to know that Orissa had preserved Tamil manuscripts. The Nayak kings of Tanjavur had their own library; they had collected a large number of manuscripts. The later Maratta rulers continued the legacy of Nayak kings and developed the present Saraswathi Mahal Oriental Manuscripts Library. Now it has been recognised as one of the National Institutions.

Collection and preservation of manuscripts is not new. We learn from the archeological evidences that the Babylonian kings like Asurpanipal and Nebuchadnezzar had maintained a very good library. The Babylonians wrote on clay tablets. The writing is known as cuneiform. Scholars retrieved Gilgamesh, the oldest epic of the world, from the Babylonian clay tablets and published it. A very good number of Buddhist manuscripts are discovered from the Tibetan Buddhist mutts.

From the Sri Vaishnava hagiographies, we come to know that Sri Ramanuja, the founder of Visistadvaita school of thought, visited the court of the Kashmir king to allow him to study the manuscript of Dramidacharya's Commentary on Bhodayana sutra. The thirst for knowledge made our forefathers go in search of manuscripts to different parts of India, even at the risk of their life. Royal patronage was easily available to deserving scholars. Linguistic differences and regional divisions did not come in their way of propagating knowledge.

This is our legacy. But today, what do we find? Each one tries to distance himself from others in the name of language, region and religion. Post-independence era is witnessing linguistic chauvinism and regional parochialism. Each region is claiming its own past glory and achievements; it completely forgets that such an achievement was possible only through common endeavour of all who settled in that region. Agastya is a case, for example. It is said that Saint Agastya came from the north and settled in Tamil land. He is believed to be the founder of the first Tamil academy (Cankam) in Madurai a few millennia ago. Acharya Dandin is another example for the liberal attitude of our forefathers.

It is a well known fact that South India has preserved precious Sanskrit manuscripts in Grantha script. It was devised in South India for learning Sanskrit easily. The Pallavas and Pandiyas recorded their royal enactments in Sanskrit in grantha script. For them, the script was only a medium known to all in South India and nothing more.

From the research papers presented in the Seminar and discussions that followed them, we come to know that still there are a large number of palm-leaf manuscripts which lie unnoticed and uncared for under the

dusty roofs of remote villages. As far as Tamil is concerned, there is now no great scholars like Dr. U.Vē. Cāminātha Aiyar. Defying all sorts of hurdles and hardships, the great savant travelled by bullock cart and sometimes on foot throughout Tamil Nadu in search of manuscripts. It is indeed Dr. U.Vē. Cāminātha Aiyar who rediscovered the Caṅkam classics as well as medieval Tamil epics and grammars.

One cannot underestimate the contribution of European scholars in the field of Manuscriptology. Maxmuller, Kelhorn, Hultzeh, Colonel Mackenzie and Abbé Dubios, to name a few, had made excellent contribution to Indian languages. Indeed, it is they who had paved the way for the rediscovery of Indian languages and their renaissance by their careful editions in the modern book-form from palm-leaf manuscripts. They collected a large number of manuscripts and created archives for their upkeep. They trained Indian scholars like T.A. Gopinatha Rao and Venkayya who were pioneers in archival studies.

I congratulate the Directors of the Institute of Asian Studies, Madras on boldly choosing this theme for the National Seminar in these days of decadence. I am sure that this stock-taking will pave the way for greater enthusiasm and serious in-depth researches. Subramania Bharathi School of Tamil Language and Literature, Pondicherry University had functioned as a nodal agency for the conduct of the Seminar. I hope that you will all carry pleasant memories of this young but vibrant University and establish contacts with us.

I once again thank the Institute of Asian Studies, Madras, for having given us this fine opportunity to interact with scholars from all over India.

Remarks about the Seminar

K. Vijayan

The three-day National Seminar on Palm-leaf and other Manuscripts in Indian languages organised by the Institute of Asian studies has come to an end. It has once again impressed upon all those present here as well as those outside through the mass media the very purpose of its existence. As I understand it aims in promoting inter-disciplinary investigation of literary and cultural facets at home in India as well as of the different Asian countries. Its avowed mission, therefore, is to lay bare the oneness of the Indian mind as a first step and ultimately that of the Asian mind in spite of the separateness of its component parts. This remains well ventilated by the discourses spread over these three days.

The topics of this Seminar were assigned on the basis of the languages belonging to all the states of India. It resulted in assembling together the representatives of all the states of India on one forum. The deliberations they made have eloquently expressed that they are one as far as their mind in general is concerned. They share the same intellectual and cultural aspirations.

It is a matter of surprise to note that the Abhimavabhārati commentary open the Vātyasāstra of Bharata prepared in Kashmir is preserved in tact in the southern most state of the country, Kerala. So also is the case with several works. It was the manuscript preserved in the Kerala University Manuscripts Library that helped in determining the correct text of the Ramāyaṇa of Valmiki when the Baroda edition was prepared. The help rendered by the Malayalam commentary on the Arthasāstra in editing the same is well known. The sacred Buddhistic Jantric work, Aryamañju Śrīmūlakalpa was preserved only in Kerala, the publication of which resulted in the revision of several chapters of the works on Indian history written by Sir Vincent Smith and K.P. Jayaswal. One can only be proud of this literary and cultural exchange that prevailed in the Indian conditions of travel in ancient items. The thirst for knowledge and its insemination has made possible many a difficult endeavour a concrete fact.

It is a matter of thrill to learn that there hardly exists any manuscript collection in India exclusively meant for one language. The manuscript collection of the North include manuscripts in the South Indian languages and vice versa. No state in the past has shut its doors in giving and taking the literary and cultural possessions anywhere.

A re-assertion of all these is made possible by this three-day seminar conducted by the inspired scholars heading the Institute of Asian studies.

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In the 20th century many scholars collected the palm-leaf manuscripts. Some of them are:

1. Veturi Prabhākara Śāstri.
2. Seshadri Ramana Kavulu (collected mss.) from Telangana and donated them to Andhra University, Waltair, and Sahitya Parishat. Kakināda.
3. Mānavalli Rāma Krishna Kavi. (It was Rama Krishna kavi who discovered the lone copy of Nannecōḍa's *Kumāra Sambhava* and published it in the year 1911).
4. Nēdunūri Gaṃgādharam.

The contemporary collections of manuscripts are:

1. Dr.Arudra's collection. He collected some 700 mss. both in India and abroad and donated them to various libraries
2. Dr.B.Rama Raju collected some 600 manuscripts. Among them some one hundred are in Tamil and Sanskrit. He collected them in Telamgana districts and later gave them to Oriental Library, Hyderabad, unpublished.
3. Marimganti Ramgācāryulu has got more than 300 manuscripts with him. He is in Kanagallu, they are unpublished.
4. Nāgalimga Sivayōgi of Mahaboob Nagar has got 200 unpublished palm-leaf manuscripts.
5. Nāyani Krishna Kumāri has got some manuscripts with her.
6. Taṃgirāla Subba Rao also has got some with him. Many are donating these collections to Oriental Libraries-unable to preserve them.

India Office Library, London has some manuscripts. The exact number is not known. Palm-leaf manuscripts were taken there for exhibiting them in the museum.

The king of France wished to have some works of eastern countries in his library. He asked Fr. Lee-Gac to collect some or even to buy some mss. from East-India Company and send them on to him. One Mr.Tumma was converted to Christianity in 1715. He had some palm-leaf mss. Lee-Gac thought that because these books praised Hinduism, he had no reason to be interested in them after becoming a Christian.

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Volume VIII Yaksagāna and Daṁḍaka.

In these two genres the Yaksagāna literature is bulky with more than five hundred texts available in Telugu. Kannada has only a few of these and Tamil has only six. They are operas with music and dance. Daṁḍaks a praise of a God or Goddess

Volume IX Vēdāntam-Philosophy**Volume X Astrology & Mathematics.****Volume XI Medicine.****Volume XII Music.****Volume XIII History.**

The Serfoji Maharaja Saraswathi Mahal Library has two volumes of descriptive catalogue which describe in the following way:

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| 2. | Śatakas. | — | 374-421. |
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| 7. | Vacana Kāvyas | — | 675 to 689 |
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